

# American Artisan

Founded 1880

The Warm Air Heating and Sheet Metal Journal

Vol. 95, No. 23

CHICAGO, JUNE 9, 1928

\$2.00 Per Year



## Our Shadow

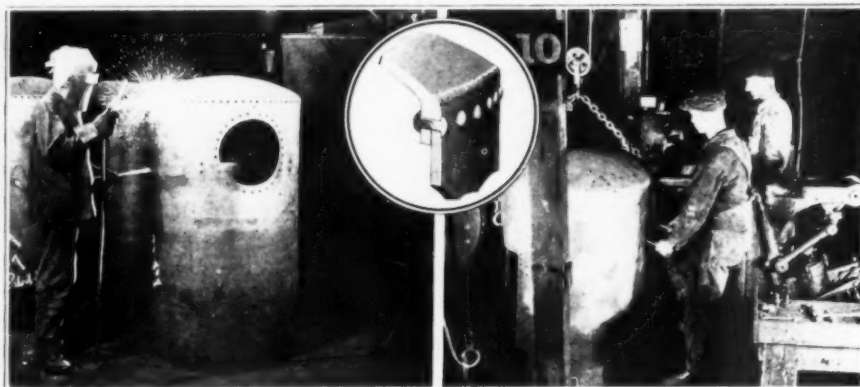
IT has been said often that an institution is the lengthened shadow of a man. This is no doubt true in many cases, but we prefer to have you regard our product, the SUCCESS Heater, as the shadow of this organization. Only by making a heater that you can sell readily and that users will approve enthusiastically can we expect our business and your business to grow and flourish.

SUCCESS HEATER MANUFACTURING CO.

Des Moines, Iowa

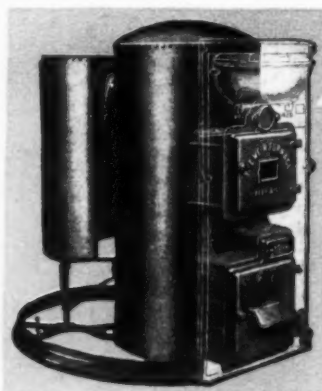
**SUCCESS HEATER**  
BUILT LIKE A BOILER RIVETED SMOKE-TIGHT

Number  
2  
of a series  
of  
Advertisements



Riveting *alone*, or Welding  
**is not good enough  
for the —**

Weir



*The original steel  
furnace---now in  
its 46th year*

Steel  
Furnace

*that's why the Weir is BOTH Riveted AND Welded*

**T**HE Main Drum head seam, for instance, is first welded by the electric arc process, fusing the two pieces of metal into one, and then riveted (with 7 16" rivets set 1-1 4" centers) with machines exerting twenty ton force, thus making the strongest as well as the tightest joint possible.

That's another Weir feature but only one-- watch for the next one and write for the Weir Book of Facts today--it tells more about *this* feature and many others.

*The* MEYER FURNACE CO.  
Peoria, Illinois







# Vernois

## Furnaces



**TODAY**, known factors of merit, not price, determine the true value of a furnace.

**WHATEVER** you want in a furnace, check these known factors in **VERNOIS** and you will find assurance of satisfaction.

**PROPORTIONED** so as to produce the greatest efficiency and best performance.

The weight is properly distributed, those castings subject to the greatest strain being the heaviest.

**FIRE DOOR**—It fits perfectly tight. Made extra large to enable firing large chunks of coal or wood.

**ASH-PIT DOOR** — Is well-fitted and full width of ash-pit for convenience in removing ashes.

**TWO GRATE CONSTRUCTIONS**, Either the Ball Bearing, Round Grate or the Triangular Bar Grate construction may be had.

**LARGE ONE-PIECE RADIATOR**—This radiator has both the cleanout and smoke collars cast on. It is reversible so that the smoke collar may be placed in any position without the use of a cleanout extension collar. There is ample draft area throughout and no ledges or corners where soot may accumulate.

Write for the **VERNOIS** proposition now.

# Mt. Vernon Furnace & Mfg. Co.

## Mt. Vernon Ill.

Published Weekly by American Artisan and Hardware Record, Inc., 620 South Michigan Avenue, Chicago, Illinois. AMERICAN ARTISAN—the Warm Air Heating and Sheet Metal Journal—entered as second class matter, March 26, 1928, at the Post Office at Chicago, Illinois, under act of March 3, 1879. Formerly entered on June 25, 1887 as American Artisan and Hardware Record.

## "SATISFACTORY HEAT THAT CAN'T BE BEAT"



is the watchword of the FLORAL CITY HEATER organization.

The best of material—the latest improvements—dealer advertising helps—ratings officially measured and guaranteed—and ironclad territorial protection coupled with a reasonable price—are some of the things that make the Floral City Queen the popular furnace with users and dealers.

Direct and indirect smoke damper in a solid cast extra large radiator, almost straight firepot, all capped joints, castings extending through front and doors fitted direct to castings, built in the air jet or smoke burner, two styles of grates, solid cast ashpit—and EVERY USER A BOOSTER, is what you buy when you obtain the Floral City franchise.

**SOME CHEAPER—NONE BETTER**

*Officially measured and rated*

**REMEMBER—WE SELL ONLY TO THE TRADE**

*STOCKS AT CHICAGO AND MONROE*

### Floral City Heater Co.

Chicago Office  
1654 Monadnock Building

MONROE, MICHIGAN

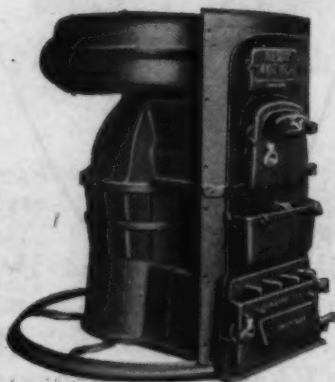
Detroit Office  
4453 Cass Avenue

*Announcing—*

## A New and Better furnace

In the NEW  
NESBIT  
"Moist Heat"  
(Registered)  
Furnace

You will find many outstanding selling points, not to be found on any others, and in addition all of the modern features of construction so necessary to the up-building of a successful and lasting heating business.



*Write for Catalogue  
and Our Agency Plan*

*A few of the  
Outstanding Features*


- "Oversize" construction.
- Extra large humidifier.
- Pouches extend thru and beyond the front.
- Solid one-piece base.
- Brass bolts and hinge pins.
- Large doors.
- Heavily ribbed firepot and combustion chamber.
- Upright E-Z Shaker if desired.

### STANDARD FURNACE & SUPPLY CO.

*Complete Furnace Service At Your Command*

OMAHA, NEBRASKA

*Mention AMERICAN ARTISAN in your reply—Thank you!*



**"Who  
Takes a  
Chance?"**

**T**HE dealer who keeps up with the procession of progress never takes a chance.

It is the man who keeps on in the same old groove who loses.

The dealer who takes on the new Series "C" Moncrief Furnace takes no chance because it brings him right up to date with all its modern improved features.

You cannot help but win with this remarkable furnace. Other men are doing it. So will you.

*Write for further  
information today*

**The Henry Furnace & Foundry Co.**  
3471 E. 49th St., Cleveland, O.

*We supply everything used  
on a warm air heating job*

**DISTRIBUTORS:**

Carr Supply Co., 412 No. Dearborn St., Chicago, Ill.  
August Bery & Son, Mack Ave. at Drexel, Detroit  
The Henry Furnace & Foundry Co., Pittsburgh, Pa.  
Frontier Water & Steam Supply Co., 366 Oak St.—  
481 Elliott St., Buffalo, New York.



Johnson Furnace Co.,  
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E. A. Higgins Co., 1112  
Douglas St., Omaha, Neb.  
Moncrief Furnace Co.,  
Atlanta, Ga.  
Moncrief Furnace &  
Mfg. Co., Dallas, Texas.  
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Warehouse, Troy, N. Y.  
Wilkes-Barre Hdwe. &  
Stove Co., 18-20 So.  
Washington St., Wilkes-  
Barre, Pa.  
The Crawford Heating  
Co., Steubenville, Ohio.  
The Henry Furnace &  
Fdy. Co., 923 Summit  
St., Toledo, Ohio.  
**EASTERN OFFICE**  
Room 1306, 11 W. 42nd  
St., New York City  
R. L. Garner, Manager

# MONCRIEF

## Make This Test On Yourself!

If you were building a home and wanted the best of everything in your heating plant, could you honestly select a furnace that came nearer your ideal of perfection than the "AFCO" Boiler Plate Furnace?

With heavy riveted steel drum, top and bottom—one piece pouches extending through the casing without a joint—and with every other detail of construction so carefully tested for cleanliness and heating efficiency, there is really no possibility of matching it in performance.

Your customers want the best heater and are placing their confidence in you to supply it. If you give them less than the "AFCO," you are missing an opportunity to capitalize on this confidence. The good will of your customers is your greatest asset for future business and profits.

If you are building for the future as well as the present, write for the "AFCO" proposition. You have everything to gain and nothing to lose. Mail the coupon:

**American  
Furnace Co.**  
ST. LOUIS, MO.

**"A F C O"**  
**Boiler Plate Furnaces**



AMERICAN FURNACE CO.,  
St. Louis, Mo.

A.A.

Please send your complete catalogue and sales plan.

Name .....

Address .....



## WISE

### The Better Furnaces

**New  
WISE  
Improve-  
ments**



WISE OPEN DOME  
CAST FURNACE

THE New Wise Open Dome is improved with the Wise Cellular Firepot.

It is One-Piece and heavily constructed.

It has a series of air cells which extend from bottom to top which enable the air to become pre-heated before entering above and into the fuel. This supplies a continuous and evenly distributed air blast.

Another feature is the Elbow Shaped Flue Collar on Inside of Radiator which is turned up so all of the heat must follow the castings to the top before entering flue.



WISE 20 SERIES CAST  
FURNACE

**New  
WISE  
Ideas**

THE Famous Wise 20 Series has added still more fame for itself since this new Patented radiator appeared.

The feed chamber and the top radiator are so constructed as

to allow communication between them which brings the opening of the fire flues of the radiator directly into the feed chamber, making the flues readily accessible for cleaning through the upper feed door. The dirt falls directly into the fire-pot, eliminating the necessity of taking the soot out by means of a narrow neck passage. This is a big advantage to the owner as a radiator that is easy to keep clean will be kept clean. And this means increased heating efficiency. This improved Wise Furnace has a New Cellular Fire Pot that provides complete combustion.

**a  
New Steel  
Furnace**



WISE STEEL FURNACE

TO enable you to confine your quality furnace business to one house the Wise Steel Furnace was created. Notice that the Wise Steel Furnace is a better steel furnace having features that make it last longer where others have weak spots.

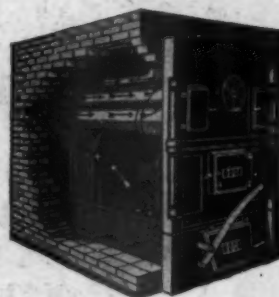
The bottom of the radiator on the Wise Steel Furnace has a Cast Iron Soot Box and Clean Out.

This you know is the big weak spot in other steel furnaces. The Wise Steel Furnace like all Wise furnaces is Guaranteed high quality. It possesses all the latest scientific heating features and all modern conveniences. It is riveted and welded and has special design grates.

Write for the new Wise catalog, No. 23, just out and special circulars illustrating these New Wise Furnaces and features in detail. Be a Wise dealer now and for all time.

**The Wise Furnace Company**  
AKRON, OHIO

*Why  
pass up  
the Big Jobs?*



## Install the Giant Roto-Blast Furnace

You can easily land them with a Roto-Blast Tubular Furnace. It is used in connection with a Fan System and can be installed in large buildings such as Churches, Gymnasiums, Factories and Garages, where steam installations are now being made.

Let us show you how to make big profits by installing Roto-Blast Furnaces. Our engineers will gladly draw up your heating and ventilating specifications. Write for prices and descriptive booklet.

With its sturdy construction, seven square feet of grate area and large heating surface, the Roto-Blast enables you to secure big jobs easily and also gives you the large profits the steam fellows are now getting.

MANUFACTURED BY

**THE MONCRIEF FURNACE CO.**  
ATLANTA, GEORGIA

# BOLTS

WE MANUFACTURE A COMPLETE LINE OF BOLT PRODUCTS, INCLUDING STOVE BOLTS, CARRIAGE BOLTS, MACHINE BOLTS, LAG BOLTS, NUTS, COTTER PINS, ETC. ALSO STOVE RODS, SMALL RIVETS AND HINGE PINS. CATALOG ON REQUEST.

**THE LAMSON & SESSIONS CO.**  
**THE KIRK-LATTY CO.**  
1971 W. 85th St. Cleveland, O.

**PATTERNS FOR STOVES AND HEATERS**  
THE CLEVELAND CASTINGS PATTERN COMPANY  
CLEVELAND, OHIO

**PATTERNS**  
FOR STOVES AND HEATERS  
VEDDER PATTERN WORKS  
FIRST-CLASS IN WOOD and IRON  
ESTABLISHED 1835 TROY, N. Y.

**IRON AND WOOD**  
**STOVE PATTERNS**  
QUINCY PATTERN COMPANY  
QUINCY, ILLINOIS

Read the Wants and Sales Pages





*Did you get the catalog telling you all about the DRIP system?*

## FOR WARM AIR FURNACES

IT'S the secret of correct Humidity—Reasonable in Price—Easy To Install—Gives Absolute Satisfaction and helps to increase your furnace sales.

What a difference a little more water makes—DRIP! DRIP! DRIP! all the while. Controlled by the heat of the furnace and putting moisture into the air in proper proportion to the heat.

Mr. Dealer! Get a furnace installed to produce 50% moisture. Give the customer what he ought to have. The ordinary vapor pan is not good enough,—it's out of date. It belongs to the horse and buggy age. Be up to date, aggressive, and give your customer the best there is.

The Automatic DRIP Humidifier is the best and most efficient moistener for warm air furnaces. It makes a warm air heating plant better and more comfortable than either hot water or steam.

The catalog, "Your Money's Worth", is a real furnace salesman! We will furnish a liberal supply with your order for Humidifiers. LISTEN! One of these little catalogs sold 100 furnaces to a builder and contractor in Waterloo, Iowa, last week! Why did he buy 100 furnaces equipped with the Automatic DRIP Humidifier? Get the catalog, "Your Money's Worth". It will tell you why.

### Why The Prejudice Against Warm Air Heating?

Who is to blame? Furnace manufacturers, jobbers and dealers, who do not think further than an ordinary vapor pan, are to blame. Don't be discouraged, warm air has it all over steam and hot water if an Automatic DRIP Humidifier is used. The catalog, "Your Money's Worth", will prove that a warm air furnace is superior to any other heating system. GET YOURS NOW. Write us today.

**Automatic Humidifier Co.**

Cedar Falls, Iowa



Oil fired furnaces and boilers, as well as coal fired furnaces and boilers, can be cleaned with the Sturtevant.

## Points the Way to GREATER PROFITS

HUNDREDS of heating engineers are now reaping large profits, cleaning heating plants by vacuum. Get your share of this profitable business. Add a Sturtevant—the most convenient and efficient cleaner on the market—to your cleaning equipment. Over 60 years of experience in making air moving machinery for all purposes, are behind the design and construction of the Sturtevant Furnace Vacuum Cleaner. It is especially built for heavy duty service.

Simplicity of construction and efficiency of operation are two outstanding features of the Sturtevant. It has only one moving part, the fans, revolving on the same shaft with the motor. The shaft runs in self-aligning ball bearings. The dust bag, bearings and fans are protected against injury by a metal collector and baffle plate inside of the front cover which stops all dirt, soot, ashes and heavy particles from reaching the working parts and allows only the dust to enter the dust bag. 99% separation is guaranteed.

The Sturtevant is the quickest and most thorough cleaning device on the market. Also the lightest in weight and easiest to handle. Its power consumption is extremely low. Complete set of suction tools and brushes is supplied. Send in the coupon now for further information.

Agents wanted for territories in Indiana and west of the Mississippi. Submit qualifications.

**Sturtevant**

(U.S. PAT. OFF.)

HYDE PARK, BOSTON, MASS.

**B. F. Sturtevant Company,  
Hyde Park, Boston, Mass.**

Dept. AA69

Without obligation to me, send along further information and price on the Sturtevant Portable Furnace Cleaner.

Name .....

Address .....

City..... State.....

Mention AMERICAN ARTISAN in your reply—Thank you!

# STEARNS Registers



**100 Per Cent**  
Free Air Capacity  
for size pipe intended

**S**TEARNS Registers deliver all the warm air sent up the stacks--and that's all that is required of a Baseboard Register--outside of being ornamental--and Stearns Registers are unusually attractive.

### All Standard Finishes

and Lacquer Finishes in Antique Brass, Brushed Brass and a perfect reproduction of Oxidized Copper.

Stearns Registers help you sell installations--they look snappy and yet they are reasonably priced.

### The Operating Device

is extremely simple and foolproof--it doesn't depend on springs or tension to be effective.

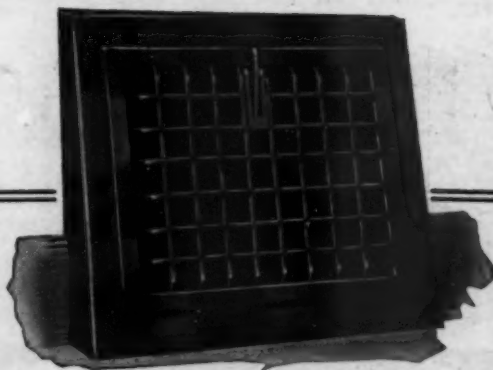
A simple Patented Cam and Ratchet self-contained handle operates Stearns Registers.

Use these high quality registers and your profits will be larger.

Your Jobber can supply you or write direct to us for catalog and prices today.

**THE STEARNS REGISTER CO.**

1234 Mt. Elliott Ave.  Detroit, Michigan



## The AUERISTOCRAT

of all registers, combining air capacity, decorative and concealing features.

Designed to conform with the Standard Code so they fit all standard boxes.

Auer Patented mechanical features make it perfect in operation,--quick and easy to install.

*Auer's Save Hours and Dollars*

**The AUER REGISTER CO.**  
Cleveland, Ohio

## LIQUID ASBESTOS

*Something Better and Entirely Different*

ELIMINATES THE USE OF ASBESTOS PAPER  
Liquid Asbestos is a white covering for old and new furnaces

IT'S FIRE AND WATERPROOF  
MAKES ALL PIPES AND FITTINGS 100% SEAMLESS

A tailor made suit for every furnace -- it spreads with a brush

Never in all furnace heating history has anything so completely jumped into such popularity

LIVE WIRE FURNACE DEALERS ARE INCREASING THEIR SALES WITH THE USE OF LIQUID ASBESTOS

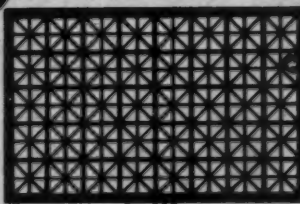
Ask your Supply Jobber or write for Dealer's Proposition today  
**B. & F. MANUFACTURING CO.** 333 South West 4th St. DES MOINES - IOWA

Wrought  
Steel



And  
Bronze

## GRILLES



No. 573

For all grille requirements write  
The Hart & Cooley Mfg. Co.  
New Britain, Conn.



No. 575



No. 576



No. 590

# No Friction



NOTICE the easy long curve on this section of HANDY PIPE—that means less heat loss, an even flow of warm air to the rooms, and a better satisfied customer.

EVERY section of HANDY PIPE is designed with the FRICTIONLESS idea in mind—notice this section—only one place for the warm air to go and it is gently guided there by *curved* angles.



WHEN you get the idea of air *flowing* like water then you see the importance of *curved* angles like those used in this section of HANDY PIPE—no retardation—no “whirlpools” to cause trouble.

HANDY PIPE has been the favorite with thousands of the liveliest warm air heating men for over 20 years—its money saving features are important as well as its better heating features. HANDY PIPE saves more time and goes together quicker. HANDY PIPE is *Union* made by journeymen mechanics and is first quality in material.



*A request for a free sample is invited*

**F. MEYER & BROTHER CO.**  
PEORIA, ILLINOIS

Registers  
Wood Faces

|| **HANDY PIPE** ||

All Warm Air  
Heating Supplies

*Say you saw it in AMERICAN ARTISAN—Thank you!*



Founded 1880

Published to Promote  
Better  
Warm Air Heating  
and  
Sheet Metal Work

# American Artisan

The Warm Air Heating and Sheet Metal Journal

Yearly Subscription  
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Canada .....\$3.00  
Foreign .....\$4.00

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### THE MOST VALUABLE THING IN THE WORLD

*I am the most desirable thing in life. Without me no one can be healthy, happy or useful.*

*The hidden wealth and vast resources of this earth would have no value without me.*

*I am the great developer of man. No other agency has called forth so many of his hidden treasures, developed more power of mind and body than I have.*

*Men and women who try to get along without me are characterless, selfish, undeveloped, useless and unprofitable members of society. I am behind every fortune, every art and science, every achievement, every triumph of man.*

*Rich men and poor men alike often try to find substitutes for me, hoping thereby to secure a larger measure of happiness, peace, and satisfaction, but they are always bitterly disappointed. Instead of gain, every substitute for me brings them infinite loss.*

*As the creator is greater than the creature, so I am greater than wealth, power, fame, learning, or any other acquired possession or quality of man, because I am the source through which he acquired them.*

*I am—Work.*



# No. 1 High Test Welding Rod

Oxweld's answer to the  
demand for stronger welds

**H**IGHER pressures and greater stresses require steel welds of greater strength. To answer this new demand, Oxweld made the No. 1 High Test Welding Rod.

Any operator can produce welds with greater tensile strength by using No. 1 H. T. Rod. This has been proved time and again in all kinds of industrial work. A recent test in the welding shop of an oil refinery showed an increase of 9,000 pounds in the tensile strength of test welds on the first trial.

Moreover, welders can work faster with Oxweld H. T. Rod. This reduces welding costs.

Wherever the strength of welds is an important factor, it will pay you to use Oxweld High Test Welding Rod.

OXWELD ACETYLENE COMPANY  
*Unit of Union Carbide and Carbon Corporation*



NEW YORK CITY, 30 E. 42d St. STOCKS IN 38 CITIES  
CHICAGO, Peoples Gas Bldg. SAN FRANCISCO, Adam Grant Bldg.  
IN CANADA, Dominion Oxygen Company, Ltd., Toronto

## Oxweld

**WELDING AND CUTTING APPARATUS**

# Our Cooks Sing - Our Waiters Dance

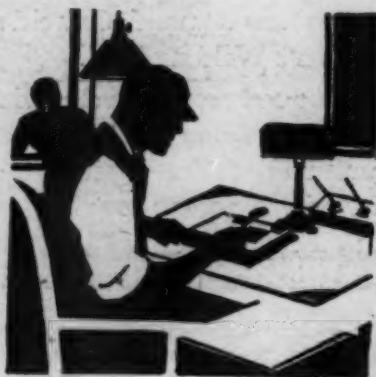
and our  
Competitors  
write our  
ADVERTISING



## PREMIER DE LUXE

"The Furnace with Every Famous Feature"

*THE truth of that slogan is well exemplified by the advertising of the various manufacturers in a recent issue of one of the leading Trade Journals. Starting with the ad which appeared on the cover, we have taken one of the leading claims from each furnace advertisement substituted the word*



*Premier for the competing make, and incorporated it into this composite ad, written by our competitors. Quotation marks show how much was taken from each. Every line written by competitors, yet every line equally true of Premier. Truly, it must be, "The Furnace with Every Famous Feature." --- Premier De Luxe*

"OUTSTANDING quality has been built into the details of Premier Heaters."—"The materials and features which are ordinary for other furnaces are not good enough for Premier."—"Our methods of maintaining and assembling each furnace before leaving the plant insure perfect fit when assembled by you on the job."—"Everything Can Be Made Cheaper and Sold For Less. But that is not the policy of the Premier Warm Air Heater Co. Dependable merchandise built by satisfied workmen who take pride in their work and do not figure 'how much' but 'how good'."—"The Premier has added still more fame for itself since this new patented radiator appeared. It possesses all the latest scientific heating features and modern conveniences."—"Quality made for a Quality Business. If you ever expect to get ahead in the furnace business, you have got to do business out of the ordinary. The place to begin is with the furnace you sell."—"You will find many outstanding selling points not to be found on any others, and in addition all the modern features of construction so necessary to the upbuilding of a successful and lasting heating business."—"The furnace dealer who sells on price alone is not building a sound business."—"A first class piece of goods selling at a moderate price has the call on all competition at all times."—"Proven in principle—in performance—and now in SALES." "Selling Premier Furnaces is the stuff that builds reputation and profits. Surely and steadily Premier Dealers are forging ahead. With so many advantages to work with, you too, can make faster progress with this superior line."

(REPRINTED FROM THE PREMIER PICTORIAL)

*If you are not reading Premier's House Organ, "The Pictorial," you are missing half the fun in the furnace business. Write, and have your name added to the mailing list.*

**PREMIER WARM AIR HEATER CO.**  
Dowagiac, Michigan



# American Artisan

The Warm Air Heating and Sheet Metal Journal



Vol. 95

CHICAGO, JUNE 9, 1928

No. 23



Window Display of the Schlafer Hardware Company, Appleton, Wisconsin, Featuring the Waterman-Waterbury Warm Air Furnace. Furnace Installations Bring This Company Much Hardware Business, and Vice Versa.

## Schlafer Hardware, Appleton, Wisconsin, Reenters Furnace Business With Standard Code Jobs

*Finds Good Volume to Be Had in Spite of Usual Cheap Competition When Goods Are Properly Displayed and Talked Up*

PROGRESSIVE hardware dealers are firmly convinced that warm air furnace sales can be made to produce sales in small hardware, and that sales in small hardware can be utilized to produce a profit from the sale of warm air furnaces.

Among the foremost of these hardware firms is the Schlafer Hardware, Appleton, Wisconsin, but contrary to the prevailing policy among many present day warm air furnace installers, the Schlafer Hardware believes that warm air furnaces cannot be sold by stacking

them in the warehouse where no one can see them. They believe that in order to sell an object it must be displayed where and in such manner that the public can see it and fully understand what it will do toward making life more enjoyable for them.

But the company has gone farther than this in their effort to sell warm air heaters. They have fully instructed their floor salesmen in the purposes and the use of the Standard Code, and what a Standard Code installation will do in the way

of producing healthful conditions in the home during the inclement season of the year at a cost that is less than any of the competitive systems of heating.

This attention to the minor details of building a sales force and carrying out a sales policy whose fundamental structure is absolutely sound has built an exceedingly enviable volume of business in warm air furnace installations for this company and they are going strong. The furnace shown in the display is a Waterman-Waterbury. Note how



attention is called to details of furnace.

A regular furnace and roofing salesman handles all prospects. Prospects who are not regular customers of the store are canvassed more thoroughly, because they believe that by selling them a furnace the same people will come back for other hardware. Long experience has taught them that only good installations will keep the faith of their trade.

Appleton is a town of 22,000 people, with the usual amount of cheap competition. At one time the Schlager Hardware went out of the furnace business because of this competition, but recently started in the furnace work again with a carefully laid out merchandising plan and have been successful in putting it across.

#### **Greater Warm Air Heating Association Prepares Advertising Sign**

The Greater Chicago Warm Air Heating Association held its regular fortnightly meeting in the Hotel Sherman, Chicago, Monday evening, June 5. R. H. Guenther presided, L. M. Burt, president, being absent.

The matter of constructing a proper sign that can be used by members of the association for the advertising of warm air furnaces engaged the attention of the members during the greater part of the meeting. It was determined to construct a sign that will carry the words, "Modern Heat Installed for Comfort, Health, Economy by (the Installers' Names) Certified by the Greater Chicago Warm Air Heating Association." Some attractive arrangement will be worked out so that the words "Modern Heat" and the word "Health" will stand out prominently and be easily seen by people passing the building either on the sidewalk or in cars on the pavement. Just what form this sign will take and what colors it will have is not yet decided upon.

The final arrangement of the Chicago Ordinance was also discussed. Copies of this ordinance as it was passed by the City Council of Chi-

cago on December 28, 1927, and the amendments that were passed by the same council April 18, 1928, are now in booklet form and can be had from Secretary Fred Goodall of the Greater Chicago Warm Air Heating Association, 4224 West North Avenue, Chicago, at 10 cents per copy. A quantity of this ordinance large enough to take care of all demands has been printed. So secretaries of local warm air heating associations can have their requirements filled by writing direct.

#### **Fundamental Business Conditions Favorable and Confidence Growing**

There has been no great change in the business situation during the past month, but fundamental conditions have continued generally favorable and confidence has become stronger. Manufacturing and distribution, though apparently not up to the highest levels of some times past, are nevertheless in large volume. While all lines are not participating equally, this is a normal condition which does not imply that anything is fundamentally wrong with business, says the June 4 Bulletin of the National City Bank of New York.

Employment reports and railway statistics have reflected seasonal improvement in industrial activity and the movement of goods, but still make a disappointing showing compared with a year ago. It should be remembered, however, that comparisons thus far have been with the most active period of last year, and the important consideration is not the status at the moment but the trend, which this year gives evidence of being forward, whereas last year it was steadily downward after the first quarter. For this reason it is to be expected that comparative statistics will make a better showing as the year advances.

The money market has continued to tighten during the past month and present indications are that the level of rates during the last half of the year will rule substantially higher than a year ago. The large absorption of credit in the security

markets, continued exports of gold, and the firm money policy of the Federal Reserve Banks as expressed in higher rediscount rates and in open market operations have combined to put money up, and there is little prospect of easing so long as these influences prevail, particularly as the season of heaviest commercial and agricultural requirements lies not far ahead. With the security market, however, accounting for the major share of the recent credit expansion, it is clear that much will depend upon developments in that quarter.

Adverse weather conditions undoubtedly have been one cause of backwardness in business, as rain and cold weather have retarded retail buying in many localities and delayed agricultural work, particularly in the South, where the cotton crop has a late start. Generally speaking, however, the crop outlook aside from cotton is good, corn seeding having been largely completed, while wheat prospects west of the Mississippi are excellent.

#### **Richardson & Boynton Co., New York, Appoints District Managers**

Richardson & Boynton Company, New York, has appointed Walter D. Clark manager of the Cincinnati office, to succeed Cooper Pogue.

John Marquardt has succeeded J. P. Sheridan as manager of the Detroit office; Joseph Heenan, formerly with the Utica Heater Company, the Utica plant and its warm-air furnace lines and other interests having been acquired by the Richardson & Boynton Company, has been appointed manager of the Pittsburgh office, with headquarters in the Wabash Building.

#### **Stephen S. Tuthill Heads Trade Association Executives, New York**

Stephen S. Tuthill, who for many years has been the very active secretary of the American Zinc Institute, Incorporated, 27 Cedar Street, New York, has been elected to the presidency of the Trade Association Executives in New York City. Congratulations are in order.



# How Prejudice Against Warm Air Heating Can Be Overcome

## *Sells Warm Air Job at Figure Higher Than Steam or Hot Water Would Cost*

By ALFRED L. JORDAN\*

**N**OW, that I have asked the question in the May 26th issue of the *AMERICAN ARTISAN*, I will try and answer it.

There is only one way that I can see to overcome prejudice, that greatest obstacle in the distribution of any commodity, and that is national advertising on a much larger scale than has been heretofore.

Advertising that has been carried on in such magazines as the ones that the National Warm Air Heating and Ventilating Association have been using has been good, and the results have justified it. But I think that if we are to get greater results, this advertising should be done in magazines of the greatest distribution of other classes as well as in the ones now used. I think that it should be in two or three women's magazines, one or two monthlies, and once a month, at least, in a weekly of wide circulation. This is bound to increase considerably the sales of warm air furnace installations.

I dare say that the *Saturday Evening Post* is bought by half of its readers just to read the advertisements. I have noticed time after time people starting at the back of this weekly and looking at each advertisement before they even think of the fiction and articles that are in it. Advertising is news, and people have to read them to keep up with what is new.

### **Selling on Merits of System**

I will cite one of my experiences in bringing about a sale of a warm air system to a woman. This woman called us over the 'phone, stating that she was in the market for a heating system. She also stated that she thought she would buy a steam

plant, but that she wanted us to send a man to see her and tell her about warm air heating. It was in the late spring of 1926. I happened to

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*The Better Business Committee of the National Warm Air Heating Association is going to get a big kick out of this article by Mr. Jordan. It is exactly the kind of stuff they are looking for to help them formulate the new policy of the association.*

*Many other furnace installers have given this and other problems of the industry serious thought. They have arrived at some pretty definite conclusions about what is wrong with the whole industry. Let's have those ideas. Let's put them where they will do the most good. The Better Business Committee will be having its first meeting since the national convention soon and the members of this committee want as many ideas as they can get to work on. Don't hide your light under a bushel. Remember the small Dutch boy who saved his nation by putting his finger in the hole in the dyke.*

---

see the April, 1926, issue of *Good Housekeeping* on her table. In this magazine there was an article by Professor A. C. Willard on warm air heating. I showed her this article and went over it with her. That article sold her, but I didn't. The house was a cottage of five rooms, hall and bath. Yet we got the job at \$410 and she had to excavate to get it located properly. She paid more to get this warm air plant in

than she would have had to do to get the steam plant in. I might add that she is still completely sold on the job, after two winters' use. If that article had not have been in *Good Housekeeping*, I am sure that this job would never have been sold.

I see more *American Magazines* in homes than any others. An advertisement once a month in this magazine would give warm air prestige. News dealers in this section tell me that they sell far more *Americans* than they do any other monthly. The *American* has human interest appeal; so would the advertisements in this great magazine.

People do not know of the many advantages of the warm air system. They must be told and retold about them through the greatest educational medium there is, which is national advertising. These advantages and the Standard Code must be constantly before them.

This advertising would put people in a much more receptive mood to listen to the warm air salesman. They will not jeer him, because they will then know that the salesman will supply them with a commodity that will give them the greatest comfort that they have ever known, and they will believe and have confidence in him because his wares are nationally advertised.

### **Advertising Will Do the Trick**

Advertising will put the warm air heated residence even on a higher plane than the radiator heated home, and most probably it will sell easier and at a higher price than the radiator heated home. People will realize—after they are educated through the medium of advertising—that they get much more for their money because it is an air-conditioning machine, as well as a heat machine.

\*W. B. Jordan & Son Lynchburg, Virginia.

All one gets with a radiator is heat—nothing more, nothing less.

I don't believe salesmen *sell* many advertised products. People who buy from a salesman have sold themselves after being taught the advantages that go with an article through national advertising. The salesman, by his finer knowledge, merely guides the buyer in his selection, and after the final analysis that is the only need there is for the salesman. All the talk in the world, without advertising to back it, is useless.

Advertising is not to be considered as an expense. On the other hand, it is a good-paying investment, because it increases the sale of a commodity many times. Besides, the ultimate consumer pays for it.

Since there are 250 or more manufacturers, and on top of these add the pipe and fitting manufacturers and the register manufacturers, it seems to me that they could all get together and they will be able to put on an advertising campaign in grand style and never let up. When these manufacturers do this, the dealers will be much more willing to and will have to advertise locally in their newspapers.

I believe that this is the only way to overcome prejudice, the hardest obstacle there is to fight in the selling of any commodity. I know that other dealers, as well as ourselves, will welcome with open arms this only life-saver for warm air heating.

#### **R. O. Springman and S. L. Coxford Will Manage Stearns Register Company**

The Stearns Register Company, 1254 Mount Elliott Avenue, Detroit, Michigan, is making plans for a definite expansion program, with Russell O. Springman as the proprietor.

The affairs of the Stearns Register Company have recently been under the direction of the Detroit Trust Company, pending the settlement of the estate of Carlotta Bonheur Stearns, whose death occurred very suddenly in California in 1927.

The company itself was organized about twelve years ago. It is housed in a thoroughly modern structure, and its equipment is modern and in a good state of preservation. It has the unique feature in its sales program of employing no salesmen direct.

Mr. Springman before joining the company was connected for the past



**R. O. Springman**

fifteen years with the Springman Paper Products Company, Detroit, in the capacity of vice president.

Steward L. Coxford, the manager of the Stearns Register Company, was formerly connected with the Detroit Trust Company and for the



**S. L. Coxford**

past eight years has been with the Stearns Register Company.

The affairs of the company are now squared around and they are ready to go ahead with their program of expansion. Whether Joe Stearns will have any further connection with the company is not known.

#### **Independent Register Bulletin Compares Construction of 1903 with Modern**

E. C. Fox, Independent Register & Manufacturing Company, Cleveland, Ohio, or some other clever writer in that progressive organization, in a recent issue of the Independent Register, has drawn a very fine comparison between the auto of today and that of 1903, and between Milady's bathing suit of 1903 and that of 1928. The purport of this comparison is to show how the ideas of 1903 have been chucked overboard, superfluous materials and accessories have been eliminated from both the ancient auto and the 1903 bathing suit, with the resultant efficiency accruing.

To quote a paragraph: "The fellows who designed and made the bathing suits of twenty-five years ago certainly gave a lot for the money. But neither the girls in swimming nor the fellows looking on got any fun out of the bathing suit of 1903. Again, it was just a matter of getting rid of material—the more the better in this case. Everybody grants that the 1928 model bathing suit is a great improvement and is hoping that much progress still lies ahead."

From here the writer goes on to compare the kitchen of years ago with the modern apartment kitchenette of today, and then, of course, he swings into registers, showing how the same progress has been made in the manufacture of registers that has occurred in the auto, the bathing suit, and the kitchenette.

A very clever piece of work, and the author is to be complimented. It might also be mentioned that list prices of the company's product are also given in the back pages of the Independent Register.



# Successful and Profitable Time Payment Business Depends—

## *Credit of Every Purchaser Must Be Thoroughly Investigated*

By R. W. STRONG\*

THE summer plan of installment buying, viz.: Buy your heater now and start payments in the fall, might sound good to the furnace dealer as long as the finance company will take the paper (and there are finance companies who will), but the fly in the ointment comes when it is necessary for the dealer to endorse this paper, for endorse it he must.

All goes well until fall arrives and the first payment is due. Mr. Buyer has lost his enthusiasm and as a result the first payment is delinquent—the finance company gets rather insistent with its letters asking for payment, and if the buyer doesn't come to time the dealer is then called on and service calls start—collection trips out to see the debtor—trips to adjust this and that—the debtor will make any manner of excuses to get out of paying. Before long all profit on the sale is used up in overhead, but the monthly payments *must* be made either by the customer or by the dealer.

Mr. Customer may have made other purchases on time during the summer months before his furnace installations started maturing, trusting in some miraculous act to provide him with the money to meet all installments. He finds himself overburdened in the fall with debts he is unable to meet, and each month they increase. Christmas time soon approaches and this means some more defaulted payments. Mr. Customer says, "Surely the finance company can't be unreasonable and hard with me at this time of the year." So another installment becomes delinquent and again Mr. Dealer is called upon to make good. In thirty days it is tax time and another and

more death-gripping excuse is made, and again Mr. Dealer is made to hold the bag. He soon finds himself spending half his valuable time making service and collection calls on customers who with him were supposed to have been a closed chapter long ago as far as spending any more time and money was concerned.

Unless your local credit bureau (and by all means join it *now*, if you are not already a member) can give your prospective "summer plan" time payment buyer a good clean report, you would better stay away from him. The same thing holds good with the majority of customers wishing any time longer than twelve months in which to pay for an article amounting to less than five hundred dollars.

While the local credit bureau is mentioned, let us say that a personal acquaintance of the writer, who is city salesman for a manufacturing concern and who sells around \$20,000 per year, has over the last two-year period lost less than fifty dollars from poor credit risks. Every prospective purchaser is looked up at the credit bureau and must pass the requirements of a good paying citizen before the sale is closed.

A debtor who is somewhat past due at your place will most surely stay as far away as possible as long as he owes you.

Extend credit only after proper investigation, then see that the credit is not abused—that your customer pays as he has promised to pay, then if you have a knack for selling you will succeed.

### **Hart & Cooley Out with New Permanent Catalog and Price List**

The Hart & Cooley Manufacturing Company, New Britain, Con-

necticut, have issued their new catalog No. 28, covering their complete line of warm air registers (floor, baseboard and sidewall), cold air faces, cold air intakes and ventilators.

The chief function of a register is to deliver into the room—freely, without hindrance by excess fretwork—all the warm air that is delivered to it from the furnace, says the manufacturer, who continues. Although H. & C. registers excel in ruggedness of construction, excellence of finish and careful packaging, it is free air capacity that has always been the dominant factor in this design.

How this all-important large free air area is obtained is described on pages 14 and 27 of this catalog. How it points the way to substantial savings for furnace installers is told on pages 12 and 26. Special attention is called to the fact that the actual free face area of every H. & C. register is shown with list prices.

As changes are made in the Air Capacity Line additional catalog pages will be sent you. Please be sure they are promptly inserted in their proper places in the booklet provided so that you may always have a complete and up to date catalog.

Write for catalog at once.

### **Credit Losses in United States Heavier Than Those by Fire**

Credit losses in the United States are more than \$200,000,000 greater annually than the fire losses of the nation, according to figures made public by E. B. Moran, manager of the central division, National Association of Credit Men.

"Figures taken from the fire underwriters' records show that the total losses nationally by fire were

\*Homer Furnace Company, Coldwater, Michigan.

\$561,980,751 for the year 1926, which are the last available," said Mr. Moran.

At the same time the liabilities in failures through bankruptcy courts alone for the past fiscal year reached the total of \$885,557,006.

"Not to exceed 25 per cent of the bankruptcy total was salvaged, which at the maximum percentage would show a net loss to creditors totaling \$661,167,755," Mr. Moran's summary points out. "To this, however, must be added the loss and charge-off of compromise settlements, which in itself runs into millions each year, plus all other losses by assignment and so-called friendly liquidation and the uncollectible accounts in all commercial activities."

"The combined total figures of all losses entailed by the business of the nation in credits," says Mr. Moran, "will reach the staggering figure of a billion dollars annually."

"Fully 50 per cent of this amazing credit loss," said Mr. Moran, "is avoidable by proper organization of credit departments to work out and investigate accounts before taking on the risks."

#### **Watch These Birds, for They Mean to Do You Right**

Here are two from J. M. Stone, Secretary-Treasurer of the Kentucky Hardware and Implement Association:

"I have just been informed of a smooth trick being worked by a man in this city who comes into your store and buys a small article for 10 or 15 cents and gives you a \$10 bill.

"After you have given him the change he discovers he has the correct change in his pocket and asks that you give back the \$10 bill, and he counts you out a \$5 and five \$1 bills, but in some way when you put the money back into your register you will be short the \$5 bill, which is another demonstration of the hand being quicker than the eye.

"I know of two merchants he has worked this trick on and they are wiser but sadder.

"Watch for this fellow, as he is very clever with his job."

#### **Here's Another One**

"Crooks are working fast; even the negroes have caught the art of giving cold checks.

"Have just received a telephone message that a very clever negro comes into your store and orders a bill of goods sent to a certain address C. O. D. Soon he returns with a check for more than his purchases and tells you he has decided to pay for the merchandise instead of having it sent C. O. D. He gets the difference in the check and his bill, and that's the last you hear from the negro.

"The check is cold and you are hot because you let the negro put it over on you. Be careful about cashing checks."

#### **Fifth Annual Meeting of Majestic Furnace Dealers June 14 and 15**

Plans are rapidly nearing completion for the fifth annual convention and school for Majestic furnace dealers to be held in Huntington, Indiana, on Wednesday and Thursday, June 13 and 14, 1928. The main purpose of the conference is to assist furnace dealers in making better furnace installations and more profit in the selling of warm air heating systems. An attempt is being made to make this year's program better than ever before.

J. C. Miles, vice-president of the Warm Air Furnace Fan Company, of Cleveland, and a leading authority on warm air heating, will conduct an interesting and helpful school. His subjects will cover many phases of the business in which you are vitally interested and will be presented in a practical manner.

Merle Sidener, president of Sidener, VanRiper & Keeling, Inc., of Indianapolis, will deliver the principal address at the banquet Thursday evening. "The New Competition" will be the subject of his talk.

In addition, many other interesting features are being planned, including an inspection of the company's modern factory, a swim in the beautiful Egyptian pool of the

Hotel Lafontaine, etc. Your expenses while in Huntington, of course, will be paid and everything is being planned by the Majestic Company for the furnace installer's convenience and pleasure. If you have not done so already, please send in your reservation to the company without delay.

#### **Liquid Asbestos, a New Furnace Pipe Insulator, Now on Market**

H. S. Busby, of B. & F. Manufacturing Company, Des Moines, Iowa, for the past five years has been working diligently on a preparation known as Liquid Asbestos to be used as a substitute for asbestos paper on furnace insulations.

This product has necessitated considerable effort and has been used as experiments in various parts of the country. For a considerable length of time there has been no market value placed on this item, but it was shipped and placed in the hands of chemists and engineers in all sections of the country for their approval, merely to get their sentiment as to its value for insulation qualities as pipe covering in connection with warm air heating pipes.

Favorable recommendations have flooded in from all parts of the country from reliable sources with reference to the great value that could be obtained from the use of liquid asbestos.

Immediately at such time a new company was formed in Des Moines, Iowa, to manufacture this product in an exclusive way. Machinery suitable for the manufacture of Liquid Asbestos is now being installed and it will, of course, be a matter of a few weeks until tons of the product can be made daily.

The sales organization is being formed at this time in quite a complete manner in order to operate through the United States in a uniform manner. From time to time the B. & F. Manufacturing Company intends to broaden its territory and eventually get into foreign countries with this product.



# *The* **INSIDE STORY** of a Great Heating Success



**Square  
Outside  
for  
Beauty**

**Round  
Inside  
for  
Efficiency**

Cut out view of new Richardson "Perfect" Square Cased Warm Air Heater, showing round interior and asbestos insulation.

**H**ERE'S a heater *born* to conquer. It inherits the heating ability of a long line of Richardson & Boynton Warm Air Heaters. Under its handsome, modern casing is the time-tested round heater, with the round fire pot and all the *proven* advantages of round interior construction. The same conservative ratings, too. The outer casing means extra insulation as well as greater beauty.

With such good looks, and such a pedigree of performance, how could this new Square Cased Warm Air Heater help going over like a Blue Streak!

\*  
This company believes in utmost protection to the dealer—the logical link between manufacturer and consumer.

## **RICHARDSON & BOYNTON Co**

Manufacturers of "Richardson" "Perfect" Heating and Cooking Apparatus Since 1837

260 Fifth Ave. New York City

New York Utica Newark Philadelphia Boston Chicago Buffalo Minneapolis Cincinnati Pittsburgh Detroit Providence

Say you saw it in AMERICAN ARTISAN—Thank you!



Battery of Sheet Metal Ventilators at Work Keeping the Rooms Below of One Industrial Plant Clear of Impure Air and Objectionable Fumes

## *Sheet Metal Ventilators More Than Paying Their Way in Industry*

*Their Use Permits Greater Employee Efficiency, With Consequent Lowering of Manufacturing Costs*

By GEORGE DUERR

**I**N the latest laugh producer of Anita Loos, "Gentlemen Marry Brunettes," that charming writer describes the disastrous results met with by one American motion picture palace builder who had ambitions to initiate the French people into the modern art of ventilating theaters. All of which goes to prove that the public must be educated gradually into the use of products which the manufacturers are constantly putting out.

Unfortunately for this builder, in

the old world tradition is stronger than almost anything else, unless it be the odors emanating from the wine cellars along the Seine River in lower Paris.

Fortunately, in America people are not so tradition bound as they in the old world, and they are more willing to accept new ideas for their comfort.

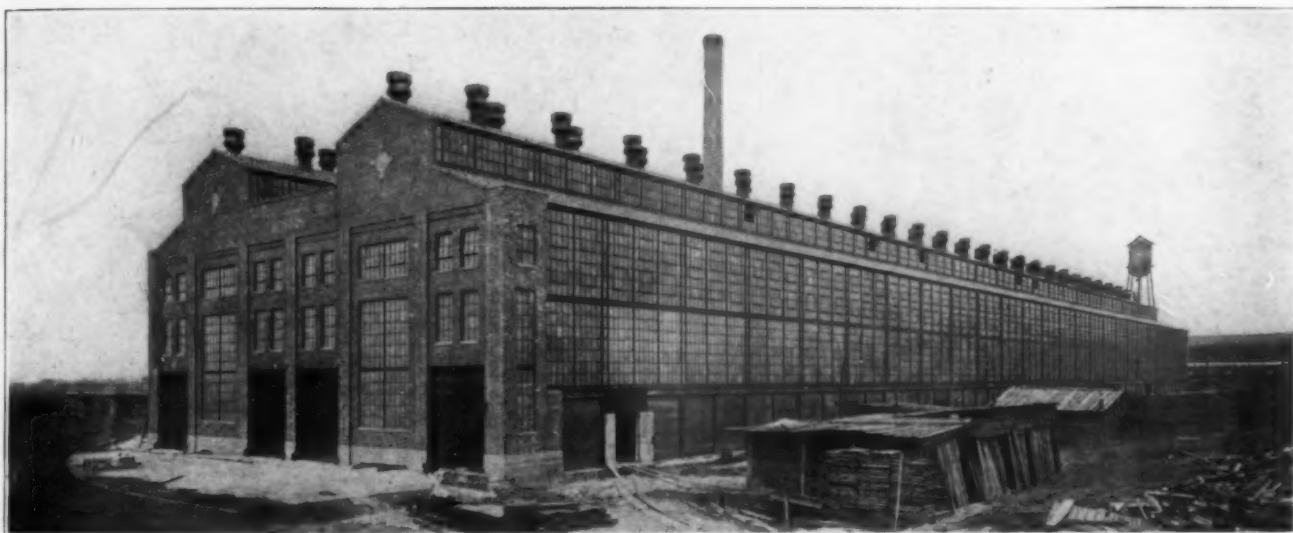
Great progress has been made within the last fifteen years in the art of ventilating in America. There is hardly a building that is erected

now in which application of the latest known developments of the art of ventilating are not applied. Industry in particular has grasped the idea as a drowning man after a straw, because industry has had proved to it the undeniable truth that proper ventilation pays in dollars and cents not only in increasing the efficiency of workers, but in cutting down insurance premiums.

In the moulding of castings, objectionable fumes and dust are created that are detrimental to the



Showing Some of the Ventilators Installed on the Buildings of the Walker Vehicle Company and the Federal Electric Company



Ventilators on the Whitman & Barns Manufacturing Company, Pullman, Illinois. The Structure Is a Forge Shop

health of the moulders and other employes, and must be disposed of. In chemical laboratories, hospitals, buildings where large numbers of people congregate, ventilating has become one of the most important considerations. In garages and explosive storage warehouses, ventilation is receiving even more consideration.

Even farmers are recognizing the value of having their hay lofts well ventilated to prevent the disastrous results of spontaneous combustion.

Ventilators take many forms. There are power ventilators and devices that utilize the air currents, thus creating lifting power that does the desired work.

In this article we show a group of ventilators in use on the indus-

trial buildings. These ventilators are designed to utilize the power of the winds to discharge objectionable fumes and odors.

#### Contemplated Building Projects Indicate

#### Continued Building Activity

The high rate of construction contracts let in the month of April is apparently to continue well into the present month.

Contracts awarded for the first four days of May were at the rate of approximately 28.1 millions per day as compared with 22.7 millions per day for the corresponding period last year. Big increases, however, were reported in educational, public works and utilities and

in residential construction, while industrial building showed a marked decline in this comparison.

Contemplated projects reported seem to bear out the theory that there will be a continuance of construction prosperity for the near future at least, with a total of 35 million per day as compared to 29 million per day for the same period last year. Increases in contemplated are chiefly in commercial and residential projects while industrial shows a sharp decline with a smaller decline in public works.

Usually contemplated projects are a fair indicator of the rate of construction that may be expected, however, in these days of 20 and 30 million dollar projects, percentage comparisons may easily be upset.



Group of Ventilators on the Foundry of the Geneva Foundry & Machinery Company, Geneva, Illinois





## "Anaconda Sheet Copper goes into the finest work we handle,"

Says Adolph Klein of Klein & Kavanagh  
New York



The trim, well-built home of Joseph Basile, Astoria, L. I., one of Klein & Kavanagh's smaller jobs.

### Mr. Joseph Basile, the owner of this house, says:

"I know how important it is to have the roof and the Sheet Metal work on a house well done. That's why, when I had a home built for myself, I wanted Klein & Kavanagh to handle that work. I'm glad that they use Anaconda Copper because I'm sold on Anaconda and I know that it will last, trouble free, as long as the house."

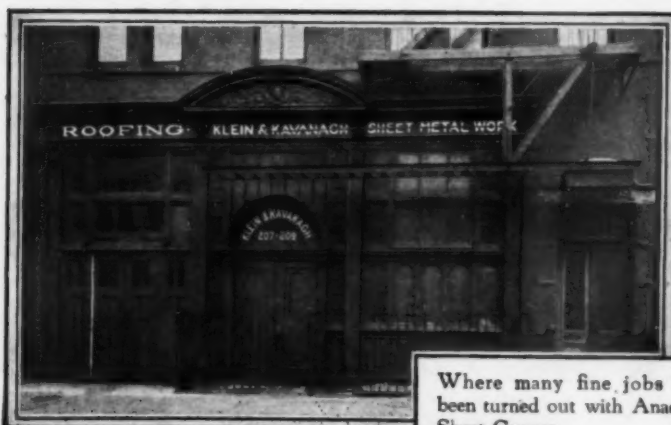


It pays to use the product of the world's largest manufacturer of copper, brass and bronze. Anaconda Copper is guaranteed 99.9% pure.

Stocks in the form of Sheets, Rolls and Economy Strips are maintained by leading distributors.

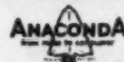
THE AMERICAN BRASS COMPANY  
GENERAL OFFICES: WATERBURY, CONN.

Canadian Mill:  
ANACONDA AMERICAN BRASS, LTD.  
New Toronto, Ont.



Where many fine jobs have been turned out with Anaconda Sheet Copper.

## Sheet Metal Work of ANACONDA COPPER



Look for the name ANACONDA in every sheet and strip. Leading Supply Houses carry it.

## Random Notes and Sketches

By Sidney Arnold

"The essence of humor is sensibility; warm, tender fellow-feeling with all forms of existence."—Carlyle.

### A Sure Method

Ed Stahler's pet hound disappeared. Having his suspicions about where the dog was, Ed put the following ad in the North West Town Chicago paper:

"Lost or Run Away—One liver-colored bird dog called Jim. Will show signs of hydrofobby in about three days."

The dog came home the following day.

\* \* \*

### The Reformer

Before Dave Farquhar began selling T. & B. registers he was more or less of a soap box orator. One day he was standing on an improvised platform and was shouting:

"What I want is reform. I want reform in religion. I want reform in marriage. I want reform in dress. I want—"

"Say, bo," came a voice from the crowd, "wot you want is chloroform."

\* \* \*

### Guilty

A Georgia lawyer tells of a darky charged in a town in that state with theft. His lawyer decided to put him in the box in his own behalf. The magistrate, being doubtful if the darky understood the nature of an oath, undertook to examine him on the point.

"Henry," he said, "you know what will happen to you if you tell a lie?"

"Yes, suh," said Henry. "I'll go to hell and burn a long time."

"Quite right," replied the judge. "And now you know what will happen if you tell the truth?"

"Yes, suh," said Henry. "We lose the case."

\* \* \*

Sholly: "Aren't sight and vision the same?"

Percy: "No, indeed. My girl's a vision; yours is a sight."

### Painless Touch System

"Where did you find this wonderful follow-up system? It would get money out of anybody."

"I simply compiled and adapted the letters my son sent me from college."

\* \* \*

### Make It Snappy

Publisher (to author): "You'll have to rewrite this novel, Mr. Scribbler, if you want it to sell. The Boston police have positively refused to suppress it."

\* \* \*

### Honeymoon by Proxy

Colored Maid: "Mrs. Wagner, ef I sends my sister to take my place could I get off for a few days?"

"What do you want to do, Mandy?" said Mrs. Albert Wagner, Chicago.

"Why, I've goin' to get married tonight and I jes wants a few days for my honeymoon."

The next morning Mrs. Wagner thought the new maid might need some instructions in preparing breakfast and was surprised to find Mandy at work.

"Why, Mandy, I thought you were to be married last night?"

"Yessum, I was married, had a beautiful wedding, white dress, long white veil, flowers and everything."

"But I thought you were going on a honeymoon?"

"Well, Mrs. Wagner, you know dat fool nigger went an' bought tickets to Chattanooga. I done been to Chattanooga and I jes told him to go on and take my sister."

\* \* \*

### Darn Carelessness

Simple Sam, innocent and harmless, lived a solitary life at the edge of town. One evening he came tramping along Main Street carrying a red lantern.

"What are you doin' with a red lantern, Sam?" asked a bystander.

"I just picked it up. Some fool left it by a hole in the street."

### Well Suited

She: "How dare you ask me to dance—I don't know you."

He: "Oh, that's all right, kid. Gentlemen prefer blondes."

She: "But I'm not a blonde."

He: "That's O. K., sister, I'm no gentleman. Let's go."

\* \* \*

### Hard Coal

"Rastus, you good for nothing scamp, where you been loafing all day? Didn't I tell you to lay in some coal?" said Charles E. Hall, Hall-Neal Furnace Company.

"Yassah. Ah's been layin' in the coal all day, tho der is lots softer places whar Ah'd ruther lay."

\* \* \*

### 1928 Holds Plenty of Business for Those Who Go After It

Said the little young red rooster, "Gosh all hemlock! Things are tough."

"Seems that worms are getting scarcer, and I cannot find enough;

"What's become of all those fat ones is a mystery to me."

"There were thousands through that rainy spell—but now where can they be?"

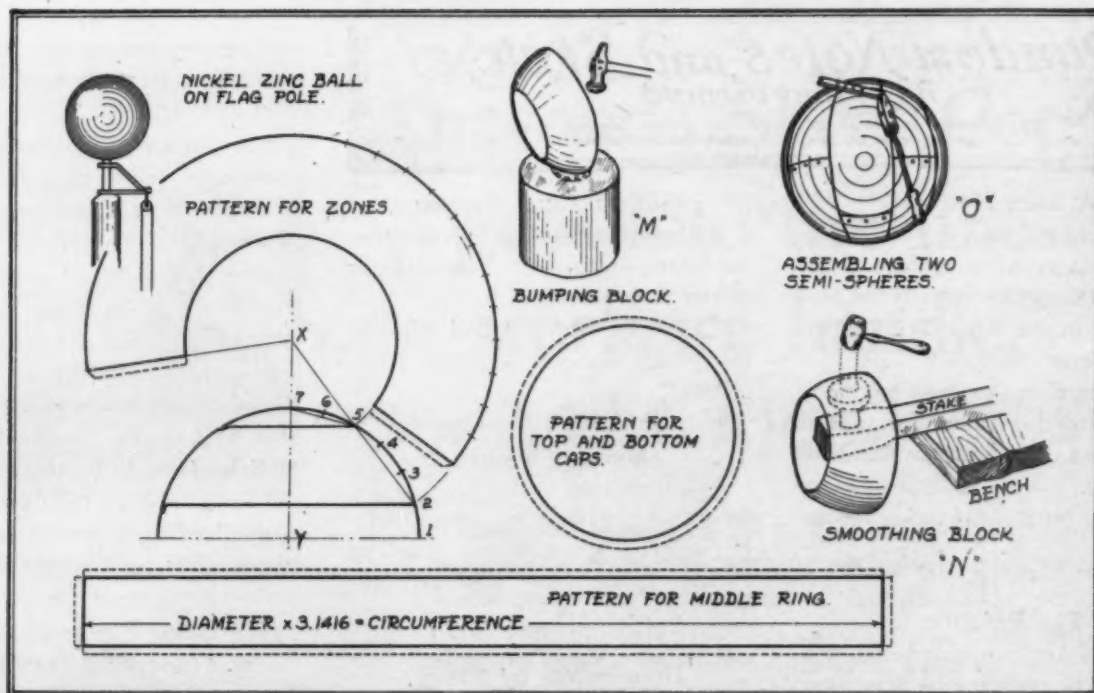
The old black hen who heard him didn't grumble or complain, She had gone through lots of dry spells, she had lived through floods of rain. So she flew up on the grindstone, and she gave her claws a whet, As she said, "I've never seen the time there weren't worms to get."

She picked a new and undug spot; the earth was hard and firm, The little rooster jeered, "New ground! That's no place for a worm." The old black hen just spread her feet, she dug both fast and free, "I must go to the worms," she said; "the worms won't come to me."

The rooster vainly spent his day, through habit, by the ways Where fat round worms had passed in squads back in the rainy days. When nightfall found him supperless, he growled in accents rough, "I'm hungry as a fowl can be. Conditions sure are tough."

He turned then to the old black hen and said, "It's worse with you, For you're not only hungry but you must be tired, too. "I rested while I watched for worms, so I feel fairly perk; "But how are you? Without worms, too? And after all that work?"

The old black hen hopped to her perch and drooped her eyes to sleep, And murmured in a drowsy tone: "Young man, hear this and weep; "I'm full of worms and happy, for I've dined both long and well; "The worms are there as always—but I had to dig like hell!" —"Doorways," published by Richards-Wilcox, Aurora, Ill.



Construction of a Sphere

## Construction of Flag Pole Sphere Among MUCH ORNAMENTAL WORK ENCOUNTERED

*Zone Method Preferred in Layout—Easier, Quicker and Makes Workmanship Job*

By O. W. KOTHE, Principal St. Louis Technical Institute

IN EXTERIOR ornamental work, the sphere is quite popular in that it always looks well and is relatively easy to make. These spheres are used on finials of buildings, on flag poles, and on cupola ornaments. In this case we use the sphere for a flag pole ornament, and to be made of nickel zinc, in order to glisten in the sun. For such work the finished sphere is generally lacquered and dressed by polishing so a perfectly keen finish is retained.

The writer helped make one of these zinc spheres over 20 years ago, which was lacquered and varnished several times and has never been touched to this day and is still in good shape. Where nickel zinc is used the luster should be maintained by this means a long period of years.

Flag pole spheres are soldered to the end of a pipe, giving it some reinforcement on the inside to resist strong winds. Our sketch shows the

external arrangement with swivel attached; this swivel is made of flat bar iron of a suitable width to make a pivot around the pipe. A pulley is hooked on the end of swivel on which the flag is raised or lowered.

In laying out the sphere, the zone method is preferred, since this method is easier, quicker and makes a more workmanship job. The length of the zones is made to such a size that a person can conveniently handle for bumping purposes. In general a sphere made in five parts, one central band, two zones, and two dished caps, is the most satisfactory way of doing this work. So first draw a horizontal and vertical center line and from Y describe the half of sphere. Then divide one quadrant into say six equal spaces, and from experience the workman will know how much he can handle in each zone.

Without experience, you can fol-

low the general scheme of our drawing—that is allow two spaces for the middle ring, which will be a straight belt, and bumped to the given curvature. For the zone, three spaces are allowed, while for the cap two spaces as radius, or four spaces as diameter.

Now the radius line z-x is drawn as the workman has found the metal works best. Thus, if he wishes to bump the radius out from the edges, then he will draw the radius through 2-5 to the vertical center x. But if he figures on compressing the edges and only bumping out the central portion as the segment 3-4 would produce, then he will draw the radius line through points 3-4 to the vertical center line. This is no doubt the easiest way, since in the bumping process there always is some compression along the edges. Or again, if all the zone arc were put in compression, the radius line



would be drawn tangent to arc 3-4. In each case a different radii would result; but the hammering or bumping process will make up the difference—that is, the workman must know how to treat the metal either to shrink it or stretch it.

In this case we use points 2-5 for drawing the radius line. So from x we describe the two arcs, in this case from points 2-5, because during the bumping process the metal will stretch to make up for the arc. But in close work the curve 2-3-4-5 must be measured off on each side of center on the radius line, so the correct girth will be maintained. On this outer curve lay off the spaces from our elevation, as 1-2-3-4, etc., making 24 spaces for the complete girth. By drawing lines to x, the inside girth is also measured to correspond to the outside girth.

The middle ring is made equal to twice the width of space 1-2, and the girth can be stepped off from elevation spaces, or figured and measured as shown, while the cap is described with radius 5-7 and is then bumped into shape.

Drawings "M"—"N"—"O" show the bumping and smoothing and assembling process. The zones and caps are clamped together, so both similar pieces can be hammered out during the one operation. A hollow is gouged out of a block and smoothed nicely by taps with the raising hammer, and after the work is bumped out, the pieces are separated and put on the smoothing stake. This is nothing but a round or oval faced stake having the approximate curvature of the sphere, and with a smooth mallet all bumps and wrinkles are smoothed out. After this the cap is soldered on each zone and the work is rounded out again somewhat, and after this the two semi-spheres are fitted together and soldered as at "O." The solder should be sweated in the seams and not just skinned along the edges.

These spheres have considerable expansion and contraction in all directions, and if the laps are not soldered well, they may crack. Then, too, all laps should be made to shed

the water so if cracks do occur, the lap edges will shed the water. Experience is about the only guide to such work and workmen who want to improve their ability should do more experimenting, even though it is with scrap metal.

#### **Allied Construction Industries Committee to Meet in Detroit in June**

John A. Pierpoint, Washington, D. C., Past President of the National Association of Sheet Metal Contractors, represented that association at a meeting of the newly organized Allied Construction Industries Committee, which consisted of representatives of sub-contractors and general contractors.

The purpose of this getting together of sub-contractors and general contractors is the culmination of five years of preliminary work to correct improper practices and to stabilize credit conditions in the building construction industry.

Two meetings had been held previous to the Washington meeting, one at Cleveland, Ohio, and one at Chicago, Illinois, following the formal organization of the committee at West Baden, Indiana. At the Cleveland meeting the National Association of Sheet Metal Contractors was represented by J. M. Saunders, while Harry J. Dettmers, president of the Associated Sheet Metal Employers of Chicago, represented the association at the Chicago meeting.

As Mr. Pierpoint stated at the meeting of the National Association of Sheet Metal Contractors in Cleveland last week, the Washington meeting had progressed to a point where the sub-contractors and general contractors were calling a spad a spad. All mincing of words was done away with and each group seemed ready to face the issue with a sincere desire to accomplish the end aimed at.

The next meeting of the committee will be held in Detroit, Michigan, some time during the month of June.

There were some twenty-five building groups at the Washington

meeting so that it can be readily seen that the project is arousing more than ordinary interest.

The United Roofing Contractors' Association was represented by Geo. E. Moore, Chicago, and Clyde C. James, Grand Rapids, Michigan. The Hollow Metal Association was represented by C. F. Burt, Cleveland, Ohio.

#### **Pennsylvania Sheet Metal Men Arrange for Convention at Erie, June 19 to 21**

The annual convention of the Sheet Metal Contractors' Association of Pennsylvania and the Distributors' and Salesmen's Auxiliary will be held on Tuesday, Wednesday and Thursday, June 19-20-21st, 1928, at Erie, Pennsylvania. Headquarters at Hotel Lawrence.

Mixed with splendid talks and discussions on the various branches of the trade there will be entertainment and a good time socially, with the best bunch of fellows you have ever met. Many others have profited by attending the meetings, and you can if you will, as convention sessions are a fertile breeding ground for new ideas—ideas that mean progress, and these ideas are as necessary to advancement as steam to an engine, gasoline to an automobile. Ideas with cooperation spell success, says W. F. Angermeyer, Secretary.

#### **Tuesday Morning**

Registration of delegates.

Convention called to order by Fred M. Braeger, chairman of the Convention Committee, introducing Hon. Joseph C. Williams, Mayor of the City of Erie.

Address of welcome.

Response by State President, M. F. Liebermann.

Appointment of Credentials, Resolutions, Auditing and Nominating Committees.

Report of President.

Report of Secretary.

Report of Treasurer.

Announcements by Convention Committee.

Question Box.

General discussion.

**Tuesday Afternoon**

Reports of standing committees:

Trade Development Committee—  
W. C. Markle, Chairman.

Vocational Education Committee  
—Louis Luckhardt, Chairman.

Address, "Vocational Education  
in Erie," by Charles H. Derby, Vo-  
cational Instructor in Academy  
High School.

Trade Relations and Policy Com-  
mittee—H. G. Hartline, Chairman.

Overhead Expense Committee—  
R. S. Hahn, Chairman.

Legislation Committee—John E.  
Pohl, Chairman.

Program Committee—H. J. Brag-  
gins, Chairman.

Membership Committee—W. F.  
Angermyer, Chairman.

**DISTRICT REPRESENTATIVES**

Eastern—George A. Hesky.

Central—Joseph Urban.

Western—Louis Luckhardt.

**Tuesday Evening**

Stag party at Kawka Inn. Fish  
dinner. Don't miss this.

**Wednesday Morning**

Address by Paul Biersach, Na-  
tional President.

Address by W. C. Markle, Na-  
tional Secretary.

Address by J. C. Miles, Vice  
President, Warm Air Furnace Fan  
Co.

Question Box.

General discussion.

Delegates' Hour—Start Some-  
thing.

**Wednesday Afternoon**

Report of Nomination Committee.  
Nomination and election of offi-  
cers.

Selection of convention city.

Address by Harry S. Rogers,  
special representative of the Sheet  
Steel Trade Extension Committee.

Address, "Customers, After All,  
Are Only Human Beings Like Our-  
selves," by E. A. Scoot.

Address, "Insurance," by a rep-  
resentative of Manufacturers' Cas-  
ualty Insurance Company.

Question Box.

General discussion.

**Wednesday Evening**

Banquet and dance, Hotel Law-  
rence.

Toastmaster, Thomas J. Quinn,

Secretary, W. F. Potts Sons Com-  
pany.

Albert K. Rowswell, reader, hu-  
morist and philosopher. Subject,  
"The Value of a Laugh."

**Thursday Morning**

Distributors' and Salesmen's Aux-  
iliary.

General discussion for the good  
of the sheet metal industry.

**Thursday Afternoon**

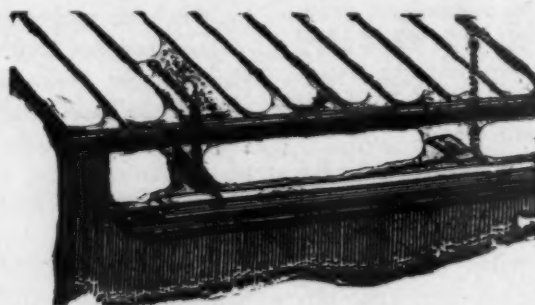
Sheet Metal Contractors' session.

Report of Credentials Committee.

Report of Resolutions Committee.

### **Horan Stay Hanger Company, Louisville, Has New Stay Gutter Hanger**

The Horan Stay Hanger Com-  
pany, Louisville, Kentucky, manu-  
facturers of tin and galvanized  
roofing caps, have produced what  
they term Horan's Stay Gutter



**The Hanger Installed**

Hanger. The device is new on the  
market and is so constructed as to  
save time while on the erection job.  
It makes joints in the bead of the  
gutter with the hanger adjusted  
without catching under the eaves.  
The stay wire is adjustable and is  
said to hang box gutter, single or  
double bead, octagon ogee, fancy  
cornice, or any kind of hanging eave  
trough. It is easily and rapidly ad-  
justed and is so made that it will  
carry the weight without sagging or  
spring from the drain line.

The hanger comes in any size  
from three to ten inches, and the  
hinged movement makes it con-  
venient for placing in gutter before  
leaving the shop.

Full information can be had by  
writing the Horan Stay Hanger  
Company, Louisville, Kentucky.

### **Charles F. Hauck & Co. Now Located in New Quarters at Springfield, Ohio**

Charles F. Hauck & Company,  
who have conducted a sheet metal  
shop in Springfield, Ohio, since  
1875, are now established in their  
new home at 148 West Main Street,  
Springfield. The new store is lo-  
cated at the northeast corner of  
Main Street and Wittenberg Ave-  
nue, one square west of their for-  
mer location.

The firm in addition to many  
clever stunts in their selling pro-  
gram have the unique slogan, "The  
Proof of the Roof Is the Wear  
Thereof." The constant growth of  
their business made the move into  
larger quarters necessary.

### **Abram Cox Company, Philadelphia, Issues Booklet on Burning Coal**

Abram Cox Company, Philadel-  
phia, has issued a booklet entitled

"Burning Your Coal Two Times."  
The booklet gives extracts from  
technical bulletins of the Bureau of  
Mines of the United States Govern-  
ment, giving suggestions for greater  
economy in burning coal.

A complete description of the  
parts and method of operation of  
the company's product is given, and  
the booklet points out how the coal  
is burned in two stages, once on the  
grates and then in the firepot, pass-  
ing flame through all the fire-travels.

### **Ed Barquist Enters Sheet Metal Business at Des Moines, Iowa**

The Ed Barquist Sheet Metal  
Shop has opened for business in  
contract and job sheet metal work at  
506 East Walnut Street, Des  
Moines, Iowa. Ed Barquist is the  
proprietor of the new shop.





Left to right, rear row: Mrs. G. A. Frankel, Mrs. Sam Bowring, Mrs. W. A. Mechling, Mrs. H. G. Grossenbacher, Mrs. W. Siewing. Middle row: Mrs. Luke Tiernan, Mrs. Arthur Symonds, Mrs. D. A. Gibson, Mrs. B. S. Phillips, Mrs. W. Cavallo, Mrs. Wm. Dieselhorst, Mrs. Ben Kolbenschlag. Front row: Mrs. Harry Gevecker, Mrs. A. P. Faessler, Mrs. Charles Bollinger, Springfield, Illinois; Mrs. Frank Mackey, Miss Laura A. Orbach, Mrs. Alex. Hoell, Mrs. A. M. Wilsdorf, Mrs. Jerry Jaekel. Mascots: Miss Joy Frankel and Miss Gail Bowring



Left to right, below—Front row: Mrs. Henry Grossenbacher, Secretary; Mrs. Ben Kolbenschlag, President; Mrs. Frank T. Bokern, Treasurer; Mrs. Ed. Cuddy, Sergeant-at-Arms. Rear: Miss Laura A. Orbach, Reporter

## St. Louis Ladies' Auxiliary Entertains at Bridge Luncheon in Century Boat Club

*Movement Toward Formation of Local Bodies Growing Rapidly*

THE Ladies' Auxiliary to the St. Louis Sheet Metal Contractors' Association held a bridge luncheon at the Century Boat Club, St. Louis, on Wednesday of last week. The St. Louis Ladies' Auxiliary has been recently formed and each and every member is putting her whole heart and soul into the organization work.

Membership in the organization consists of wives and sisters of sheet metal contractors in the St. Louis Sheet Metal Contractors' Association. The St. Louis ladies' body has the unique feature of having among its membership Mrs. Charles Bollinger, who comes all the way from Springfield, Illinois, to attend the meetings.

This movement towards the formation of Ladies' Auxiliaries to the

various sheet metal contractors' organizations, started by Miss Mary O'Leary of Louisville, Kentucky, president of the National Ladies' Auxiliary, is indeed commendable. Since the formation of the national organization women in many cities have taken upon themselves the burden of putting local organizations into operation. In doing this they have shown their willingness to work with the men. It is to be hoped that as more of the women come to understand the purposes and the value of such a local organization as that in St. Louis, Chicago, Louisville, Dallas and many other cities, they will not hesitate to join in the movement.

One important work which the ladies' auxiliary is doing is that of getting the wives of sheet metal con-

tractors acquainted with one another. The planning of joint entertainment functions is another important work which the auxiliary is doing, all of which is toward the uplift of the entire sheet metal industry.

The officers of the St. Louis local are as follows: President, Mrs. Ben Kolbenschlag; Secretary, Mrs. Henry Grossenbacher; Treasurer, Mrs. Frank T. Bokern; Sergeant-at-Arms, Mrs. Ed. Cuddy; Reporter, Miss Laura A. Orbach.

### Authorship of Article, Page 177, in May 26th Issue, Incorrectly Stated

Attention is called to the article on page 177 of the May 26, 1928, issue of AMERICAN ARTISAN. This article carries the by-line of W. B. Jordan, of W. B. Jordan & Son, Lynchburg, Virginia. This by line appeared on the article inadvertently in error. The article was written by Alfred L. Jordan, the son of W. B. Jordan, and we wish to make this correction.



# Is Advertising Economic Waste for Sheet Metal Contractor?

By WILLIAM McFEE\*

**H**OW many times have you heard business men exclaim, "Spend money for advertising. . . . I should say not . . . my overhead costs are eating up my profits now!"

The next time you hear that or a similar expression, put the man down in a special mental classification as short-visioned. In the popular idiom of the day, "he doesn't know his stuff."

True, this great modern force, this mold-er of human emotions and opinions, isn't a panacea for sales ills. It will not make an inferior product or service superior. It won't offset indifferent salesmanship. Neither will it win fame, prestige and profits for the meek-hearted, the tenderfoot whose soles are easily blistered.

Coördination! . . . there's the secret, if secret it may be called. Carefully-planned, well-conceived and executed advertising is *coördinated* with the various divisions of the business—production, sales, and the human element.

Now, how does all this apply to the sheet metal contractor? The average contractor is hardly in the position to conduct an elaborate and searching survey of his local or regional markets. In nine cases out

of ten neither would there be justification for his retaining experienced advertising counselors with their intensive planning high class art and copy and the rest of the paraphernalia of true printed salesmanship.

Unless, then, the contractor has arrived at the place where he can pay handsomely (of course, with

sheet metal, of formed products, is the logical advertising counselor for the contractor. If he is at all progressive this manufacturer is already telling his story to the general public—the contractor's own audience. Moreover, if he is wide-awake to his opportunities he is doing everything in his power to cement relationships between contractors and buyers of sheet metal work.

This, to be accomplished effectively, calls for utmost coöperation between manufacturer and contractor. Above all, the manufacturer should sense keenly the contractor's sales problems, both now and of the future. Furthermore, he must meet those needs to the best of his ability. Sound, convincing dealer advertising, founded on the bedrock of intimate acquaint-

ance with product and consumer habits, is the answer.

On the other hand the balance of effectiveness lies with the contractor. His is the power to breathe life and animation into the advertising campaign . . . or, he can let it suffocate and die a natural death. All the King's horses and all the King's men won't move sheet metal off shelves that are weighted with dust-covered and forgotten dealer helps.

To get down to brass tacks, let's take some of these more important "dealer helps" and analyze them,

The American Artisan,  
620 So. Michigan Avenue,  
Chicago, Illinois.

(Attention Mr. Geo. J. Duerr, Editor)

Gentlemen: I notice on page 160 of the May 26th issue of the AMERICAN ARTISAN a cartoon, caricature, or what have you, which is quite interesting.

This man, Mr. Merrill, in my judgment, is just the man the furnace industry has been looking for, for many years.

What the furnace industry needs just now, is a man of extraordinary power of observation and analysis in order that he may solve that perplexing problem: "What's the Matter With the Industry?"

Mr. Merrill knows of our organization only by hearsay, yet he caricatures the whole of our organization. He has my hat, and my legs, our secretary's cigar, our chief draftsman's white vest, our auditor's glasses and our president's waist line.

Any man who can so completely and accurately analyze an industrial organization, is certainly the man to get us out of our rut.

I, therefore, suggest Artist Mr. Merrill, as the director-in-general of the warm air furnace industry, with the object in view of combating the national advertising campaign now being put on by the radiator industry.

Yours very truly,

The Warm Air Furnace Fan Company

J. C. Miles,  
Vice President

the expectation of being rewarded handsomely, too) for exclusive and individualized advertising, he is likely to drop the idea much as he would hot solder.

Still dropping an idea is not losing it. And this idea of advertising to develop and expand a business simply will not be lost. It is fundamental, vital . . . as essential to present-day business as air is to existence.

## Manufacturers Can Help

So the wise contractor turns "manufacturer-ward." And why shouldn't he? The manufacturer of

\*Article written by Mr. McFee for the Texas Sheet Metal Contractors' Bulletin, and appearing in the Armco Ingot Iron Shop News.

both for purposes and anticipated results.

### Shop Signs Attract

At the top of the list is the shop sign. Here, at the entrance to your shop, the prospect is greeted, for instance, with the announcement that you do "quality work with quality iron." It identifies your shop . . . associates it in the mind of the prospect with convincing advertisements that he or she read in the great national magazines. Undecided minds and hesitating feet are guided within; and, once inside, your experience with things sheet metal combined with the selling instinct gains another customer.

The pity of it is that so many of these excellent "stop" signs are obscured, neglected, unused, instead of being conspicuously out there in front where they can play their part in boosting profits. So much for shop signs. Suffice it to say that they are achieving much in the way of getting new and profitable business for the sheet metal contractor.

### Let Them Know You're Busy

Then there is the job card. Every assignment, whether it be a repair job, replacement, or new work, ought to be announced to passersby. The effective way to do it is with the job card.

Colorful, attention-attracting, with the contractor's name prominently displayed, it tells the world that he is out after the business and that he's getting it, too. You know how the world respects, admires, and turns to the go-getter.

### Letterheads Give Distinctive Tie-Up

Letterheads and billheads are another medium for impressing your audience. Like most other dealer helps, these are supplied free by the manufacturer, usually with the provision that, along with your shop, his product be mentioned. If you are handling his product and it is one that your prospects know, or should now, it is mighty good bus-

iness to use this material to the fullest extent possible.

### Everybody Reads a Newspaper

Newspaper advertisements occupy an important niche in establishing closer contact with prospects and customers. Here, again, the cost usually consists of the actual space purchase. The manufacturer furnishes the copy and engravings, or, as is more often the case, supplies matrixes in various sizes. This latter method is simple, effective and economical for the contractors, provided the manufacturer has applied his knowledge of how, when and where people buy sheet metal work.

### Who's More Welcome Than the Mailman?

Another form of printed salesmanship that is justifiably coming into its own among sheet metal contractors is direct-by-mail advertising. If the contractor specializes in any particular kind of construction, such as roofing, ventilator work, or blower-pipe systems, this method of advertising is made to order for him. He can compile his mailing lists from directories or records of past business, have the manufacturer prepare or assist in the preparation of letters and enclosures, and then go straight to the buying heart of his prospects with powerful, impelling and personal messages.

But direct-by-mail advertising is not only for the sheet metal specialist. It has its place in every advertising program designed to draw prospects to the sales "mat." The general sheet metal contractor can break down his many lines and direct his mail appeals to each. As an illustration, one or more mailings can be sent out to get spring business—repairs, replacements or new construction. In the fall, or throughout the year for that matter, there are furnaces that need attention. One or two letters to furnace prospects are in order here and, with suitable enclosures, they should pull business. But again, much depends on whether these letters and

enclosures are properly conceived and attractively printed, typed, multigraphed or mimeographed.

Once more the manufacturer appears on the scene. By providing appropriate folders, booklets, return post cards, and assisting in the preparation of selling letters, the contractor's advertising costs are pared to the core.

These are the major divisions of advertising so far as the sheet metal contractor is interested. Of course, billboards, directory and program advertisements, car cards, and other ramified forms have their places in the sun also. But for putting the prospect into an *acceptance* mood the five varieties discussed in the foregoing will do the job effectively, efficiently, and economically.

### An Aid to Sales

Even though the contractor definitely expects advertising to be a promoter of sales—and he has every reason to expect this—it must constantly be remembered that all forms of advertising are *only aids* nor charm or black magic, but tools; as much so as the very machines and instruments that are used in fabricating sheet metal. Only the one helps to create business and the other functions after that business has been created.

### Like a Snowball, It Grows as It Goes

Continuity is the last word in successful advertising—or persistence, perseverance, consistency—whatever you choose to name it. Usually spasmodic advertising only "carries coals to Newcastle" . . . gets its sponsor nowhere in particular. Rather it is the piling up of many continuous impressions, no matter how insignificant they seem on the surface, that eventually service rendered is attuned to the sweeps away the buyer's natural resistance. Finally, if the product or spirit of the advertising, you have won a staunch customer, to have and hold by continued advertising and "quality work." This is the end to which well-planned advertising is the means.



# May Closed With Three More Steel Stacks Active—Sheet Mills Cut Down Backlogs

## More Interest in Third Quarter Pig Iron—Non-ferrous Metals Firm With Exception of Tin

**B**LAST furnace activity reached the highest point in eleven months when May closed with 197 stacks in blast, a net gain of three over April 30.

Not since 1923 has May registered an increase in active stacks and, significant of the virility of the steel markets, the showing was made possible entirely by the lighting of steelworks units.

Sheet demand, excepting that of the automotive industry for the full finished grade, is contracting and operations are partially sustained by backlogs.

Mahoning Valley mills are at an 85 per cent gait this week, three points over last week, but Chicago is pressed to hold at 60 per cent. Quoted minimums of 2.65 cents, Pittsburgh, on black, 1.95 cents on blue and 3.60 cents on galvanized are by no means the extreme minimums, especially on black and galvanized.

Specifications for tin plate are easily the best for any finished product, enabling makers to average over 90 per cent.

### Pig Iron

At Pittsburgh, merchant pig iron furnaces admit defeat in competition for basic tonnage, being unable to follow the downward price trend.

A Johnstown steelworks and a valley steelworks shared the order, the latter taking 18,000 tons.

Merchant stacks are maintaining \$16, valley, as minimum. Bessemer iron at \$17, valley, is selling in small lots. Only one sale of 150 tons of malleable is noted at \$17.25, valley, for a specific analysis, ordinary malleable being obtainable at \$17, valley. All producers of foundry iron now recognize \$17, valley, as the maximum obtainable, and at least two interests have booked up regular customers for 1,000 to 5,000 tons at that price.

Average sales prices for May on basic and bessemer pig iron, as compiled by W. P. Snyder & Company, are \$16.25 and \$17.287, respectively.

These compare with \$16.70, the April basic average, and \$17.50 for April for bessemer, which was the unchanged figure for four months.

A year ago the May averages were \$18.20 and \$19.18, respectively, for basic and bessemer.

At Chicago, quiet inquiries are developing orders for a fair volume of pig iron. A malleable inquiry in western Michigan calls for 3,000 tons.

It is estimated that close to 30,000 tons are on inquiry, some for whole or part of third quarter. Prompt shipment is asked in many instances. The rate of shipments, which are close behind those of the past two months, indicates a healthy rate of consumption.

The price of \$18, base, Chicago furnace, has developed steadiness and is holding.

At Birmingham, sales of pig iron are in small lots and not as active as recently.

Deliveries have not lessened, and furnaces are shipping more than they are making. Eleven blast furnaces are producing foundry iron.

The price is \$16, base, Birmingham.

### Copper

Copper is unchanged, with electrolytic quoted 14.75 cents, delivered Connecticut, and 14.87½ cents, delivered Middle West; refinery, 14.62½ cents; lake, 14.75 cents and 14.87½ cents, and casting, 14.50 cents.

### Zinc

Prime Western has been in a dull market, with producers asking mostly 6.15 cents, East St. Louis, but with a little prompt metal available slightly less.

Producers are firm, partly on ac-

count of the strong ore market at \$40 a ton, and partly because they believe users will be forced to buy more actively soon. High grade metal is active and unchanged.

### Lead

Buying has been large and well diversified.

The market is strong at the level reached a week ago in two jumps of ten points each to 6.30 cents, New York.

### Tin

The tin market has been in a fairly active condition today, but owing to larger offerings the prices have undergone a little further reaction to 49.37½ cents on Straits tin for spot and June deliveries and 49.50 cents for futures. It was reported this morning that 49.37½ cents was bid for spot Straits without acceptance and that 25 tons were sold at 49.50 cents, but this afternoon several lots have been sold at 49.37½ cents with sellers over at this price.

July and onward have been done at 49.50 cents and some far distant futures in comparatively small amounts are said to have also been done at this price.

### Solder

Chicago warehouse prices on solder are as follows: Warranted 50-50, \$32.25; Commercial 45-55, \$29.25; plumbers', \$26.25; all per 100 pounds.

### Old Metals

Wholesale quotations in the Chicago district, which should be considered as nominal, are as follows: Old steel axles, \$16.00 to \$16.50; old iron axles, \$23.00 to \$23.50; steel springs, \$16.50 to \$17.00; No. 1 wrought iron, \$11.50 to \$12.00; No. 1 cast, \$12.75 to \$13.25; all per net tons. Prices on non-ferrous metals are quoted as follows, per pound: Light copper, 9¾ cents; zinc, 3½ cents; cast aluminum, 12¼ cents.



# Chicago Warehouse Metal and Furnace Supply Prices

AMERICAN ARTISAN is the only publication containing Western Metal, Furnace Supply and Hardware prices corrected weekly

## METALS

### PIG IRON

Chicago Fdy., No. 2	\$18.00
Southern Fdy. No. 2	23 01
Lake Superior Charcoal	27 04
Malleable	18.00

### FIRST QUALITY BRIGHT TIN PLATES

1C 20x28 112 sheets	\$25 10
IX 20x28	29 00
IXX 20x28 56 sheets	16 20
IXXX 20x28	17 55
IXXXX 20x28	18 95

### TERNE PLATES

IC 20x28, 40-lb. 112 sheets	\$25 00
IX 20x28, 40-lb. 112 sheets	27 75
IC 20x28, 35-lb. 112 sheets	21 15
IX 20x28, 35-lb. 112 sheets	23 80
IX 20x28, 30-lb. 112 sheets	19 55
IV 20x28, 30-lb. 112 sheets	23 05
IC 20x28, 15-lb. 112 sheets	18 05

"ARMCO" INGOT IRON PLATES  
No. 8 ga. up to and including  
1/4 in.—100 lbs. \$4 55

### COKE PLATES

Cokes, 80 lbs., base, 20x28	\$13 00
Cokes, 90 lbs., base, 20x28	13 50
Cokes, 100 lbs., base, 20x28	14 00
Cokes, 107 lbs., base, IC	14 20
Cokes, 135 lbs., base, IX	16 40
Cokes, 155 lbs., base, 56 sheets	9 20
Cokes, 175 lbs., base, 56 sheets	10 05
Cokes, 195 lbs., base, 56 sheets	10 90

### BLUE ANNEALED SHEETS

Base 10 ga.	per 100 lbs. \$2 50
"Armco" 10 ga.	per 100 lbs. 4 00

### ONE PASS COLD ROLLED BLACK

No. 18-20	per 100 lbs. \$2 75
No. 22	per 100 lbs. 3 00
No. 24	per 100 lbs. 3 25
No. 26	per 100 lbs. 4 05
No. 27	per 100 lbs. 4 10
No. 28	per 100 lbs. 4 20
No. 29	per 100 lbs. 4 35
No. 30	per 100 lbs. 4 45

### "ARMCO" GALVANIZED

"Armco" 24	per 100 lbs. \$6 15
------------	---------------------

### GALVANIZED

No. 16	per 100 lbs. \$4 20
No. 18	per 100 lbs. 4 45
No. 20	per 100 lbs. 4 60
No. 22	per 100 lbs. 4 65
No. 24	per 100 lbs. 4 80
No. 26	per 100 lbs. 5 05
No. 27	per 100 lbs. 5 15
No. 28	per 100 lbs. 5 20
No. 30	per 100 lbs. 5 70

### BAR SOLDER

Warranted 50-50	per 100 lbs. \$32 25
Commercial 45-55	per 100 lbs. 29 25
Plumbers	per 100 lbs. 26 25

### ZINC

In Slabs	\$ 8 50
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### SHEET ZINC

Cask Lots (600 lbs.)	\$12 25
Sheet Lots	13 25

### BRASS

Sheets, Chicago base	18 1/2 c
Mill base	18 1/2 c
Tubing, brazed base	27 1/2 c
Wire, base	18 1/2 c
Rods, base	16 1/2 c

### COPPER

Sheets, Chicago base	24 1/2 c
Mill base	23 1/2 c
Tubing, seamless base	26 1/2 c
Wire, No. 9, E & S Ga.	19 1/2 c
Wire, No. 10, B & S Ga.	19 1/2 c
Wire, No. 11 B & S Ga.	20 1/2 c
Wire, No. 12, B & S Ga. and heavier	19 c

## LEAD

American Pig	\$7 20
Bar	8 20

## TIN

Pig Tin	per 100 lbs. \$53 00
Bar Tin	per 100 lbs. 59 00

## HARDWARE, SHEET METAL SUPPLIES, WARM AIR FURNACE FITTINGS AND ACCESSORIES.

### ASBESTOS

Paper up to 1/16	6c per lb.
Roll board	6 1/4 c per lb.
Mill board 3/32 to 1/4	6c per lb.
Corrugated Paper (350 sq. ft. to roll)	\$6 00 per roll

### BRUSHES

Furnace Pipe Cleaning Bristle, with handle, each	\$0 75
Flue Cleaning Steel only, each	1 25

## BURRS

Copper Burrs only	40-2 1/2 %
-------------------	------------

## CEMENT, FURNACE

American Seal, 5-lb. cans, net	3 45
American Seal, 10-lb. cans, net	35
American Seal, 25-lb. cans, net	2 25
Pecora	per 100 lbs. 7 50

## CHIMNEY TOPS

Adams' Revolving	Wt. Dsz. Price Dsz.
4 in.	21 lbs. \$11 00
6 in.	34 lbs. 11 50
7 in.	30 lbs. 12 50
8 in.	33 lbs. 15 00
9 in.	51 lbs. 16 50
10 in.	56 lbs. 18 00
12 in.	66 lbs. 22 00
14 in.	110 lbs. 36 00

## CLINKER TONGS

Each	\$0 75
Per doz.	8 40

## CLIPS

Damper No-Rivet Steel, with tail pieces, per gross	\$9 50
Rivet Steel, with tail pieces, per gross	7 50
Tail pieces, per gross	2 40

## COPPERS—Soldering

Pointed Roofing 3 lb. and heavier	per lb. 40c
2 1/2 lb.	per lb. 45c
2 lb.	per lb. 48c
1 1/2 lb.	per lb. 55c
1 lb.	per lb. 60c

## CORNICE BRAKES

Chicago Steel Bending Nos. 1 to 6B	Net
------------------------------------	-----

## CUT-OFFS

Gal., plain, round or cor. rd.	26 gauge
28 gauge	35%

## DAMPERS

"Yankee" Hot Air 7 inch, each 200, doz.	\$1 00
8 inch, each 250, doz.	2 20
9 inch, each 300, doz.	2 60
10 inch, each 320, doz.	2 80
Smoke Pipe 7 inch, doz.	\$1 00
8 inch, doz.	2 00
9 inch, doz.	2 20
10 inch, doz.	3 75
12 inch, doz.	4 50

## ADAMS No. 1 CHECK

Check and Collar Complete 8 inch, each	2 00
9 inch, each	2 25
End Check Only 8 inch, each	1 00
9 inch, each	1 25
Collar Only 8 inch, each	50
9 inch, each	65

## No. 2 CHECK

8 inch, each	1 00
9 inch, each	1 00
10% Disc. on Adams No. 1 and No. 2 Check	
Diamond Smoke Pipe 7 inch, doz.	\$ 2 00
8 inch, doz.	2 20
9 inch, doz.	4 00
10 inch, doz.	6 00

## Adams' Sheet Metal

7 inch, doz.	\$ 1 60
8 inch, doz.	2 20
9 inch, doz.	2 60
10 inch, doz.	2 80
12 inch, doz.	3 50
14 inch, doz.	5 00

## EAVES TROUGH

Galv. Crimpedge, crated 75 & 5%	
Zinc, "Barnes"	60%

## ELBOWS

Conductor Pipe Galv. plain or corrugated, round flat Crimp.	
28 Gauge	60%
26 Gauge	45%
24 Gauge	15%

## Galv. & Terne Steel

Plain Rd. and Rd. Corr.	
28 Ga.	60%
26 Ga.	45%
24 Ga.	15%

## Square Corrugated

No. 28 Gauge	50%
26 Gauge	35%

## Fortico Elbows

Standard Gauge Conductor Pipe, plain or corrugated.	
Not nested	70 & 4%
Nested Solid	70 & 5%

## Sq. Corr., A. & B. & Octagon

28 Ga.	50%
26 Ga.	35%

## Partico

1", 1 1/4", 1 1/2"	45%
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## Copper

16 oz., all designs	50%
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## Zinc

All styles	60%
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## ELBOWS—Stove Pipe

1-piece Corrugated, Uniform Blue "Milcor" No. 28 Gauge, Dsz.	
6-inch	\$1 05
8-inch	1 20
7-inch	1 75

## Special Corrugated

6-inch	\$1 00
7-inch	1 40

## Adjustable—Uniform Blue

"Milcor" No. 28 Gauge, Uniform Blue.	
6-inch	\$1 65
6-inch	1 75
7-inch	2 10

## WOOD FACES—50% off list.

FENCE 726-6-12 1/4 (100 rods)	\$25 68
1948-6-14 1/4 (100 rods)	43 62

## FILES AND RASPS

Heller's (American)	50-10%
American	60-10%
Arcade	50%
Black Diamond	50%
Eagle	50%
Great Western	50%
Kearney & Foot	50%
McClellan	50%
Nicholson	50%
Simonds	60%

## FIRE POTS

Geo. W. Diener Mfg. Co.	Es.
No. 02 Gasoline Torch, 1 qt.	\$ 5 18
No. 0250, Kerosene, or Gasoline Torch, 1 qt.	6 50
No. 10 Tinner's Furn. Square tank, 1 gal.	11 20
No. 15 Tinner's Furn. Round tank, 1 gal.	10 70
No. 21 Gas Soldering Furnace	3 00
No. 110 Automatic Gas Soldering Furnace	10 50

## Quick Meal Stove Co.

Vesuvius, F. O. B. St. Louis 30%	
(Extra Disc. for large quantities.)	

## GALVANIZED WARE

Pails (Galv. after made), 10-qt.	\$2 00
Tubs (Galv. after made), No. 1	5 75
No. 2	6 50

## GLASS

Single Strength, A, 52-in. brackets	80-5%
Single Strength, 9, 34 to 40-in. brackets	80-5%
Single Strength, A, all other brackets	80-5%
Double Strength, A, all sizes	80%

## HANGERS

Conductor Pipe Milcor Perfection Wire	25%
Milcor Triplex Wire	10%

## Eaves Trough

Milcor Steel (galv. after forming) List	plus 12 1/2 %
Milcor Hellock E. T. Wire, List	plus 50%

## HOOKS

Conductor "Direct Drive" Wrought Iron for wood or brick	15%
---	-----

## HUMIDIFIER

"Front-Rank," Automatic In single lots	50%
In lots of 10 or more	50-5%
In lots of 25 or more	50-10%
Vapor pans, etc., each	50%

## LIFTERS

Stove Cover Coppered	per gro. \$6 00
Alaska	per gro. 4 75

## MALLETS

Tinners Hickory	per doz. \$3 25
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## MITRES

Galvanized steel mitres, 28 Ga.	60-20
26 Ga.	60-20

## NAILS

Cut Steel	\$4 25
Cut Iron	4 25

## Wire

Common	\$3 10
Cement Coated	3 10

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NETTING, POULTRY		RIDGE ROLL	
Galvanized before weav-	—	Galv., Plain Ridge Roll,	—
ing.....	50%	b'did.....	75-10-1%
Galvanized after weaving.....	50-10%	Galv., Plain Ridge Roll	—
		crated.....	75-10%
		Globe Finials for Ridge Roll.....	50%
PASTE		SCREWS	
Asbestos Dry Paste:	—	Sheet Metal	—
200-lb. Barrel.....	\$16 00	7. 1/4x1/2, per gross.....	\$9 52
100-lb. barrel.....	8 75	No. 10, 1/4x1/2, per gross.....	41
35-lb. pail.....	3 50	No. 14, 1/4x1/2, per gross.....	33
10-lb. bag.....	1 10		
5-lb. bag.....	50		
2 1/2-lb. cartons.....	35		
POKERS, FURNACE		SHEARS, TINNERS' & MACHINISTS'	
Each.....	\$0 75	Viking.....	\$32 00
POKERS, STOVE		Lennox Throatless	—
Nickel Plated, coll handles,	—	No. 18.....	35%
per doz.....	1 10	Shear blades.....	10%
Wrt Steel, str't or bent,	—	(f. o. b. Marshalltown, Iowa)	—
per doz.....	\$0 75		
PIPE		SHIELDS, REGISTER	
Conductor	—	No. 1 "Gem" floor.....	\$12 00 doz.
Cor. Rd., Plain Rd., or Sq.	—	No. 2 "Gem" wall.....	6 00 doz.
Galvanized	—	SHOES	
Crated and nested (all	—	Galv. 25 Gauge, Plain or cor-	—
gauges).....	75-2 1/4%	rugated round flat crimp.....	60%
Crated and not nested	—	26 gauge round flat crimp.....	45%
(all gauges).....	70-15%	24 gauge round flat crimp.....	15%
Furnace Pipe	—	SNIPS, TINNERS	
Double Wall Pipe and	—	Clover Leaf.....	40 & 10%
Fittings.....	50%	National.....	40 & 10%
Single Wall Pipe, Round	—	Star.....	50%
Galvanized Pipe.....	50%	Milcor.....	Net
Galvanized and Tin Fit-	—	SQUARES	
tings.....	50%	Steel and Iron.....	Net
Lead	—	(Add for bluing \$3 per doz. net)	—
Per 100 lbs.....	\$12 50	Mitre.....	Net
Stove Pipe	—	Try.....	Net
"Milcor" "Titelock" Uniform Blue	—	Try and Bevel.....	Net
Stove	—	Try and Mitre.....	Net
25 gauge, 5 inch U. C.	10 50	For's.....	per doz. \$6 00
25 gauge, 6 inch U. C.	11 00	Winterbottom's.....	10%
25 gauge, 7 inch U. C.	12 00	STOPPERS, FLUE	
30 gauge, 5 inch U. C.	9 00	Common.....	per doz. \$1 10
30 gauge, 6 inch U. C.	10 00	Gem, No. 1.....	per doz. 1 10
30 gauge, 7 inch U. C.	12 00	Gem, flat, No. 1.....	per doz. 1 00
T-Joint Made up	—	VENTILATORS	
6-inch, 25 ga.....per doz.	\$ 4 00	Standard.....	\$0 to 40%
All Zinc	—	WIRE	
No. 11, all styles.....	60%	Plain annealed wire, No. 8	—
		per 100 lbs.....	\$3 05
		Galvanized barb wire, per	—
		100 lbs.....	3 50
		Wire Cloth—black painted,	—
		12-mesh, per 100 sq. ft.....	1 30
		Cattle Wire—galvanized catch	—
		weight spool, per 100 lbs.....	3 30
		Galvanized Hog Wire, 30 red	—
		spool, per spool.....	3 10
		Galvanized Plain Wire, No.	—
		3, per 100 lbs.....	3 30
		Stove Pipe, per stone.....	1 10
		WRINGERS	
		No. 799, Guarantee.....	each \$5 10
		No. 770, Bicycle.....	each 4 75
		No. 670, Domestic.....	each 4 35
		No. 110, Brighton.....	each 3 70
		No. 750, Guarantee.....	each 5 10
		No. 740, Bicycle.....	each 4 70
		No. 32, Pioneer.....	each 3 40
		No. 2, Superb.....	each 3 05





# ARMCO

INGOT IRON  
RESISTS RUST

**It's ductile—forms easily.  
Cuts cost—in shop and on the job.  
Insures contented customers.  
Is easier to sell—prospects know it.**

**ARMCO Distributors Ass'n of America**  
Executive Offices, Middletown, Ohio

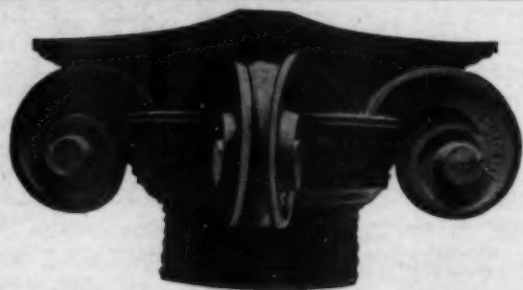
## PERFORATED METALS



All Sizes and Shapes of Holes  
In Steel, Zinc, Brass, Copper, Tinplate, etc.  
For All Screening, Ventilating and Draining  
EVERYTHING IN PERFORATING METAL

**THE HARRINGTON & KING PERFORATING CO.**

5649 FILLMORE ST.—CHICAGO, ILL. U. S. A.  
NEW YORK OFFICE 114 LIBERTY ST.



**GEROCK BROS. MFG. CO.**  
**SHEET METAL ORNAMENTS**  
AND STATUARY  
1252 So. Vandeventer Ave., St. Louis, Mo., U.S.A.  
Write for Catalogue



The 12-Cylinder Ventilator  
Used in Every State  
in the Union.

**SPECIFY ÆOLUS  
VENTILATORS**

## ÆOLUS FOR HOMES

The home should be properly ventilated—few of them are. Here is a sales opportunity often overlooked by the average Sheet Metal Worker, but one which offers a lucrative business to those who take advantage of it.

**Æolus-Dickinson**

Vent Makers Since 1888

3332-52 South Artesian Avenue  
CHICAGO

Phone: Lafayette 1862-1863

Round  
Corrugated



Plain Round



NEVER MADE WITHOUT THIS

TRADE *F. Dieckmann* MARK

*Quality and Service Made 'em Famous*

Made of one piece of heavy gauge material, in all styles and angles from 10 to 90 degrees, of 24, 26, 28 ga. ternes, then galvanized after formation.

## DIECKMANN Elbows and Shoes

*are the standard of the market  
and always give satisfaction*

Send for new catalogue 26 showing complete line

**The Ferdinand Dieckmann Co.**

P. O. Station B, Cincinnati, O.

Square  
Corrugated  
Style A



Square  
Corrugated  
Style  
B



Not made lighter than  
28 ga. or 16 oz. copper



# BUYERS' DIRECTORY

**Asbestos—Liquid.**  
B. & F. Mfg. Co., Des Moines, Ia.  
**Acetylene (Gas) Dissolved.**  
Prest-O-Lite Co., Inc.,  
New York, N. Y.

**Air Filters.**  
Sturtevant Co., B. F., Boston, Mass.

**Bale Ties.**  
American Steel & Wire Co.,  
Chicago, Ill.

**Bolts—Stove.**  
The Kirk-Latty Co.,  
Cleveland, Ohio

**Lamson & Sessions Co.,**  
Cleveland, Ohio  
**Ryerson & Son, Inc.,**  
Joa. T.,  
Chicago, Ill.

**Brakes—Bending.**  
Dreis & Krump Mfg. Co.,  
Chicago, Ill.

**Ryerson & Son, Inc.,**  
Joa. T.,  
Chicago, Ill.

**Brakes—Carnegie.**  
Dreis & Krump Mfg. Co.,  
Chicago, Ill.

**Brass and Copper.**  
American Brass Co.,  
Waterbury, Conn.  
**Copper & Brass Research As-**  
**sociation,**  
New York

**Burners—Gas.**  
Wander-Worker Gas Appliance  
Co.,  
Cincinnati, Ohio

**Code Calculator.**  
Standard Code Computing Rule  
Co.,  
Baltimore, Maryland

**Cans—Garbage.**  
Osborn Co., The J. M. & L. A.,  
Cleveland, Ohio

**Castings—Malleable.**  
Fanner Mfg. Co., Cleveland, Ohio

**Ceilings—Metal.**  
Burton Co., The W. J.,  
Detroit, Mich.

**Friedley-Voshardt Co.,**  
Chicago, Ill.  
**Milwaukee Corrugating Co.,**  
Mil., Ch'go, La Crosse, Kan. City  
**Wheeling Corrugating Co.,**  
Wheeling, W. Va.

**Chaplets.**  
Fanner Mfg. Co., Cleveland, Ohio

**Chimney Tops.**  
Standard Ventilator Co.,  
Lewisburg, Pa.

**Clinker Tonga.**  
L. J. Mueller Furnace Co.,  
Milwaukee, Wis.

**Stover Mfg. & Engine Co.,**  
Freepport, Ill.

**Copper.**  
American Brass Co.,  
Waterbury, Conn.

**Copper & Brass Research As-**  
**sociation,**  
New York

**Cornices.**  
Friedley-Voshardt Co.,  
Chicago, Ill.

**Milwaukee Corrugating Co.,**  
Mil., Ch'go, La Crosse, Kan. City

**Cutting Blowpipes.**  
Oxweld Acetylene Co.,  
New York, N. Y.

**Out-offs—Rain Water.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Dampers—Quadrants—Accessories.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**L. J. Mueller Furnace Co.,**  
Milwaukee, Wis.

**Parker-Kalon Corp.,**  
New York, N. Y.

**Stover Mfg. & Engine Co.,**  
Freepport, Ill.

**Dies—Punch & Press.**  
La Salle Machine Works,  
Chicago, Ill.

**Diffuser—Air Duct.**  
Aeolus-Dickinson Co.,  
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Milwaukee, Wis.

**Doors—Metal.**  
Lupton's Sons Co., David,  
Philadelphia, Pa.

**Drive Screws—Hardened Metallic.**  
Parker-Kalon Corp.,  
854 West 18th St., New York

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Barnes Metal Products Co.,  
Chicago, Ill.

**Berger Bros. Co.,**  
Philadelphia, Pa.

**Berger Co., L. D.,**  
Philadelphia, Pa.

**Burton Co., The W. J.,**  
Detroit, Mich.

**Lupton's Sons Co., David,**  
Philadelphia, Pa.

**Milwaukee Corrugating Co.,**  
Mil., Ch'go, La Crosse, Kan. City

**New Jersey Zinc Sales Co., The**  
New York, N. Y.

**Wheeling Corrugating Co.,**  
Wheeling, W. Va.

**Elbows and Shoes—Conductor.**  
Barnes Metal Products Co.,  
Chicago, Ill.

**Dieckmann Co., Ferdinand,**  
Cincinnati, Ohio

**Lupton's Sons Co., David,**  
Philadelphia, Pa.

**Milwaukee Corrugating Co.,**  
Mil., Ch'go, La Crosse, Kan. City

**Wood Faces—Cold Air.**  
Auer Register Co., Cleveland, Ohio

**American Wood Register Co.,**  
Plymouth, Ind.

**Milwaukee Corrugating Co.,**  
Mil., Ch'go, La Crosse, Kan. City

**Fences.**  
American Steel & Wire Co.,  
Chicago, Ill.

**Fittings—Conductor.**  
Barnes Metal Products Co.,  
Chicago, Ill.

**Milwaukee Corrugating Co.,**  
Mil., Ch'go, La Crosse, Kan. City

**Flanges.**  
Chicago Metal Mfg. Co.,  
Chicago, Ill.

**Fittings—Steel Pipe.**  
Chicago Metal Mfg. Co.,  
Chicago, Ill.

**Five Thimbles.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Furnace Cement—Asbestos.**  
Buckeye Products Co., The,  
Cincinnati, Ohio

**Connors Paint Mfg. Co., Wm.,**  
Troy, N. Y.

**Milwaukee Corrugating Co.,**  
Mil., Ch'go, La Crosse, Kan. City

**Furnace Cement—Liquid.**  
Technical Products Co.,  
Pittsburgh, Pa.

**Furnace Cleaners—Suction.**  
Brillion Furnace Co., Brillion, Wis.

**Sturtevant Co., B. F., Boston, Mass.**  
**Williamson Heater Co.,**  
Cincinnati, Ohio

**Furnace Coloring (Enamel).**  
B & F Mfg. Co., Des Moines, Iowa

**Furnace Fans.**  
A. H. Robinson Co., Massillon, Ohio

**Warm Air Furnace Fan Co., The**  
Cleveland, Ohio

**Williamson Heater Co.,**  
Cincinnati, Ohio

**Furnace Rings.**  
Forest City-Walworth Run  
Foundries Co., Cleveland, O.

**Milwaukee Corrugating Co.,**  
Milwaukee, Wis.

**Furnaces—Gas.**  
Calkins & Pearce, Columbus, O.

**Mueller Furnace Co., L. J.,**  
Milwaukee, Wis.

**Furnaces—Warm Air.**  
Agricola Furnace Co., Gadsden, Ala.

**American Furnace Co.,**  
St. Louis, Mo.

**American Foundry & Furnace**  
Co.,  
Bloomington, Ill.

**Brillion Furnace Co., Brillion, Wis.**  
**Detroit-Michigan Stove Co.,**  
Detroit, Mich.

**Floral City Heater Co.,**  
Monroe, Mich.

**Forest City-Walworth Run Fdy.**  
Co.,  
Cleveland, Ohio

**Fox Furnace Co., Elyria, Ohio**  
**Henry Furnace & Fdy. Co.,**  
Cleveland, Ohio

**Hess-Snyder Co., Massillon, Ohio**  
**Homer Furnace Co.,**  
Coldwater, Mich.

**Lamneck Co., W. E.,**  
Columbus, Ohio

**Langenberg Mfg. Co.,**  
St. Louis, Mo.

**Lennox Furnace Co.,**  
Marshalltown, Ia.; Syracuse, N. Y.

**May-Fiebeger Furnace Co.,**  
Newark, Ohio

**Meyer Furnace Co., The,**  
Peoria, Ill.

**Monerief Furnace Co., Atlanta, Ga.**  
**Mt. Vernon Furnace & Mfg. Co.,**  
Mt. Vernon, Ill.

**Mueller Furnace Co., L. J.,**  
Milwaukee, Wis.

**Premier Warm Air Heater Co.,**  
Dowagiac, Mich.

**Richardson & Boynton Co.,**  
New York, N. Y.

**Rybolt Heater Co., Ashland, Ohio**  
**Standard Furnace & Supply Co.,**  
Omaha, Neb.

**Success Heater Mfg. Co.,**  
Des Moines, Iowa

**Thatcher Co.,**  
Chicago, Ill.

**XXth Century Heating & Vent-**  
**ilating Co.,**  
Akron, Ohio

**Waterman-Waterbury Co.,**  
Minneapolis, Minn.

**Western Steel Products Co.,**  
Duluth, Minn.

**Williamson Heater Co.,**  
Cincinnati, Ohio

**Wise Furnace Co.,**  
Akron, Ohio

**Garages—Metal.**  
Thomas & Armstrong Co., The,  
London, Ohio

**Gas (Acetylene) Dissolved.**  
Prest-O-Lite Co., Inc.,  
New York, N. Y.

**Gas (Nitrogen).**  
Linde Air Products Co.,  
New York, N. Y.

**Gas (Oxygen).**  
Linde Air Products Co.,  
New York, N. Y.

**Glass—Wire.**  
Lupton's Sons Co., David,  
Philadelphia, Pa.

**Grilles.**  
Auer Register Co., Cleveland, Ohio

**Harrington & King Perforating**  
Co.,  
Chicago, Ill.

**Hart & Cooley Co.,**  
New Britain, Conn.

**Independent Reg. Co.,**  
Cleveland, Ohio

**Tuttle & Bailey Mfg. Co.,**  
Chicago, Ill.

**Grilles—Store Front.**  
Tuttle & Bailey Mfg. Co.,  
Chicago, Ill.

**Guards—Machine and Belt.**  
Harrington & King Perforating  
Co.,  
Chicago, Ill.

**Handles—Boiler.**  
Berger Bros. Co., Philadelphia, Pa.

**Handles—Soldering Iron.**  
Hyro Mfg. Co., New York, N. Y.

**Hangers—Eaves Trough.**  
Berger Co., L. D., Philadelphia, Pa.

**Horan Stay Hanger Co.,**  
Louisville, Ky.

**Lupton's Sons Co., David,**  
Philadelphia, Pa.

**Milwaukee Corrugating Co.,**  
Mil., Ch'go, La Crosse, Kan. City

**Heaters—Cabinet.**  
Fox Furnace Co., Elyria, Ohio

**Mueller Furnace Co., L. J.,**  
Milwaukee, Wis.

**Waterman-Waterbury Co.,**  
Minneapolis, Minn.

**Heaters—Gas.**  
Heaters—School Room.

**Floral City Heater Co.,**  
Monroe, Mich.

**Meyer Furnace Co., The,**  
Peoria, Ill.

**L. J. Mueller Furnace Co.,**  
Milwaukee, Wis.

**Standard Furnace & Supply Co.,**  
Omaha, Neb.

**Waterman-Waterbury Co.,**  
Minneapolis, Minn.

**Hooks—Conductor.**  
Berger Co., L. D.,  
Philadelphia, Pa.

**Hotels.**  
Fort Shelby Hotel, Detroit, Mich.

**Humidifiers.**  
Automatic Humidifier Co.,  
Cedar Falls, Iowa

**L. J. Mueller Furnace Co.,**  
Milwaukee, Wis.

**Lath—Expanding Metal.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Machines—Crimping.**  
Bertsch & Co.,  
Cambridge City, Ind.

**Machinery—Culvert.**  
Bertsch & Co.,  
Cambridge City, Ind.

**Machines—Tin Smith's.**  
Bertsch & Co.,  
Cambridge City, Ind.

**Burton Co., The W. J.,**  
Detroit, Mich.

**Dreis & Krump Mfg. Co.,**  
Chicago, Ill.

**Interstate Machinery Co.,**  
Chicago, Ill.

**La Salle Machine Works,**  
Chicago, Ill.

**Marshalltown Mfg. Co.,**  
Marshalltown, Iowa

**Osborn Co., The J. M. & L. A.,**  
Cleveland, Ohio

**Peck, Stow & Wilcox Co.,**  
Southington, Conn.

**Ryerson & Son, Inc., Jos. T.,**  
Chicago, Ill.

**Whitney Mfg. Co., W. A.,**  
Rockford, Ill.

**Mandrels.**  
Hyro Mfg. Co., New York, N. Y.

**Metals—Perforated.**  
Harrington & King Perforating  
Co.,  
Chicago, Ill.

**Miters.**  
Friedley-Voshardt Co.,  
Chicago, Ill.

**Miters—Eaves Trough.**  
Barnes Metal Products Co.,  
Chicago, Ill.

**Lupton's Sons Co., David,**  
Philadelphia, Pa.

**Milwaukee Corrugating Co.,**  
Mil., Ch'go, La Crosse, Kan. City

**Nails—Hardened Masonry.**  
Parker-Kalon Corp.,  
New York, N. Y.

**Nails—Wire.**  
American Steel & Wire Co.,  
Chicago, Ill.

**Nitrogen (Gas).**  
Linde Air Products Co.,  
New York, N. Y.

**Ornaments—Sheet Metal.**  
Friedley-Voshardt Co.,  
Chicago, Ill.

**Geroch Bros. Mfg. Co.,**  
St. Louis, Mo.

**Milwaukee Corrugating Co.,**  
Mil., Ch'go, La Crosse, Kan. City

**Oxygen (Gas).**  
Linde Air Products Co.,  
New York, N. Y.

**Paint.**  
Connors Paint Mfg. Co., Wm.,  
Troy, N. Y.

**Patterns—Furnace and Stove.**  
Cleveland Castings Pattern Co.,  
Cleveland, Ohio

**Quincy Pattern Co., Quincy, Ill.**  
**Vedder Pattern Works,**  
Troy, N. Y.

**Pipe and Fittings—Furnace.**  
Burton Co., The W. J.,  
Detroit, Mich.

**Henry Furnace & Fdy. Co.,**  
Cleveland, Ohio

**Lamneck Co., W. E.,**  
Columbus, Ohio

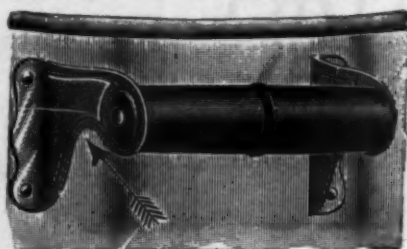
**Meyer & Bro. Co., F., Peoria, Ill.**  
**Milwaukee Corrugating Co.,**  
Mil., Ch'go, La Crosse, Kan. City

**Mueller Furnace Co., L. J.,**  
Milwaukee, Wis.

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Cleveland, Ohio

**Standard Furnace & Supply Co.,**  
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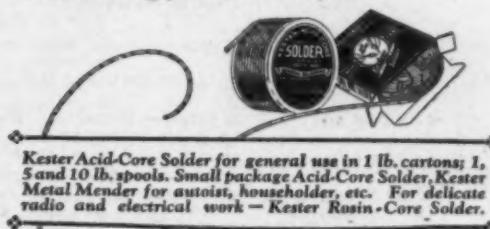
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IT IS IMPORTANT in Sheet Metal work to have well soldered joints. A difficult job may be well handled to the finish—but if the soldering is weak, the work falls flat.

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Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Pipe—Conductor.**  
Barnes Metal Products Co.,  
Chicago, Ill.  
Berger Bros. Co.,  
Philadelphia, Pa.  
Chicago Metal Mfg. Co.,  
Chicago, Ill.  
Dieckmann Co., Ferdinand,  
Cincinnati, Ohio  
Friedley-Voshardt Co.,  
Chicago, Ill.  
Lupton's Sons Co., David,  
Philadelphia, Pa.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
New Jersey Zinc Sales Co., The  
New York, N. Y.  
Wheeling Corrugating Co.,  
Wheeling, W. Va.

**Posts—Steel Fence.**  
American Steel & Wire Co.,  
Chicago, Ill.  
**Presses.**  
La Salle Machine Works,  
Chicago, Ill.

**Punches.**  
Bertsch & Co.,  
Cambridge City, Ind.  
Interstate Machinery Co.,  
Chicago, Ill.  
La Salle Machine Works,  
Chicago, Ill.  
Peck, Stow & Wilcox Co.,  
Southington, Conn.  
Ryerson & Son, Inc., Jos. T.,  
Chicago, Ill.  
Whitney Mfg. Co., W. A.,  
Rockford, Ill.

**Punches—Combination Bench and Hand.**  
Hyro Mfg. Co., New York, N. Y.  
Ryerson & Son, Inc., Jos. T.,  
Chicago, Ill.  
Whitney Mfg. Co., W. A.,  
Rockford, Ill.

**Punches—Hand.**  
Hyro Mfg. Co., New York, N. Y.  
Ryerson & Son, Inc., Jos. T.,  
Chicago, Ill.  
Whitney Mfg. Co., W. A.,  
Rockford, Ill.

**Patty—Stove.**  
Connors Paint Mfg. Co., Wm.,  
Troy, N. Y.

**Radiator Cabinets.**  
The Hart & Cooley Mfg. Co.,  
New Britain, Conn.  
Tuttle & Bailey Mfg. Co.,  
Chicago, Ill.

**Radiators—Shields.**  
Beh & Co., Inc., New York, N. Y.

**Ranges—Combination Gas & Coal.**  
Quick Meal Stove Co.,  
St. Louis, Mo.  
Thatcher Co.,  
Newark, N. J.

**Ranges—Gas.**  
Quick Meal Stove Co.,  
St. Louis, Mo.

**Register Shields.**  
Beh & Co., Inc., New York, N. Y.

**Registers—Warm Air.**  
Auer Register Co., Cleveland, Ohio  
Forest City-Walworth Run  
Foundries Co., Cleveland, O.  
Hart & Cooley Co.,  
New Britain, Conn.  
Henry Furnace & Fdy. Co.,  
Cleveland, Ohio  
Lamneck & Co., W. E.,  
Columbus, Ohio  
Meyer & Bro. Co., F., Peoria, Ill.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Mueller Furnace Co., L. J.,  
Milwaukee, Wis.  
Stearns Register Co.,  
Detroit, Mich.  
Standard Furnace & Supply Co.,  
Omaha, Neb.  
Tuttle & Bailey Mfg. Co.,  
Chicago, Ill.

**Registers—Wood.**  
American Wood Register Co.,  
Plymouth, Ind.  
Auer Register Co., Cleveland, Ohio  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
L. J. Mueller Furnace Co.,  
Milwaukee, Wis.

**Repairs—Stove and Furnace.**  
Hessler Co., H. E.,  
Syracuse, N. Y.

**Ridging.**  
Armco Distributors Ass'n of  
America, Middletown, Ohio  
Lupton's Sons Co., David,  
Philadelphia, Pa.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Rivets—Stove.**  
The Kirk-Latty Co.,  
Cleveland, Ohio  
Lamson & Sessions Co.,  
Cleveland, Ohio  
Ryerson & Son, Inc., Jos. T.,  
Chicago, Ill.

**Rods—Stove.**  
The Kirk-Latty Co.,  
Cleveland, Ohio  
Lamson & Sessions Co.,  
Cleveland, Ohio

**Rolls—Forming.**  
Bertsch & Co.,  
Cambridge City, Ind.

**Roofing Cement.**  
Connors Paint Mfg. Co., Wm.,  
Troy, N. Y.  
Pecora Paint Co.,  
Philadelphia, Pa.

**Roof—Flashing.**  
Hessler Co., H. E., Syracuse, N. Y.  
Milwaukee Corrugating Co.,  
Milwaukee, Wis.

**Roofing—Iron and Steel.**  
Armco Distributors Ass'n of  
America, Middletown, Ohio  
Burton Co., The W. J.,  
Detroit, Mich.  
Friedley-Voshardt Co.,  
Chicago, Ill.  
Inland Steel Co.,  
Chicago, Ill.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Osborn Co., The J. M. & L. A.,  
Cleveland, Ohio  
Ryerson & Son, Inc., Jos. T.,  
Chicago, Ill.  
Wheeling Corrugating Co.,  
Wheeling, W. Va.

**Roofing—Tin.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Taylor Co., N. & G.,  
Philadelphia, Pa.  
Wheeling Corrugating Co.,  
Wheeling, W. Va.

**Roofing Tools.**  
Wm. Biersmann, Brooklyn, N. Y.

**Roofing—Zinc.**  
New Jersey Zinc Sales Co., The,  
New York, N. Y.

**Rubbish Burners.**  
Hart & Cooley Co.,  
New Britain, Conn.

**Schools—Sheet Metal Pattern Drafting.**  
St. Louis Technical Institute,  
St. Louis, Mo.

**Schools—Warm Air Heating.**  
St. Louis Technical Institute,  
St. Louis, Mo.

**Screws—Hardened Metallic Drive.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Parker-Kalon Corp.,  
354 West 13th St., New York

**Screws—Hardened Self-Tapping, Sheet Metal.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Parker-Kalon Corp.,  
354 West 13th St., New York

**Screens—Perforated Metal.**  
Harrington & King Perforating  
Co.,  
Chicago, Ill.

**Shears—Hand and Power.**  
Interstate Machinery Co.,  
Chicago, Ill.

Marshalltown Mfg. Co.,  
Marshalltown, Iowa  
Peck, Stow & Wilcox Co.,  
Southington, Conn.  
Ryerson & Son, Inc., Jos. T.,  
Chicago, Ill.  
Unishear Co., Inc.,  
New York, N. Y.  
Viking Shear Co.,  
Erie, Pa.

**Sheet Metal Screws—Hardened, Self-Tapping.**  
Parker-Kalon Corp.,  
354 West 13th St., New York

**Sheets—Black and Galvanized.**  
Armco Distributors Ass'n of  
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Burton Co., The W. J.,  
Detroit, Mich.  
Inland Steel Co.,  
Chicago, Ill.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Osborn Co., The J. M. & L. A.,  
Cleveland, Ohio  
Ryerson & Son, Inc., Jos. T.,  
Chicago, Ill.

Taylor Co., N. & G.,  
Philadelphia, Pa.  
Wheeling Corrugating Co.,  
Wheeling, W. Va.

**Sheets—Iron.**  
Armco Distributors Ass'n of  
America, Middletown, Ohio  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Ryerson & Son, Inc., Jos. T.,  
Chicago, Ill.

**Sheets—Tin.**  
Taylor Co., N. & G.,  
Philadelphia, Pa.

**Sheets—Zinc.**  
New Jersey Zinc Sales Co., The,  
New York, N. Y.

**Shingles and Tiles—Metal.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Wheeling Corrugating Co.,  
Wheeling, W. Va.

**Sifters—Ash.**  
Diener Mfg. Co., G. W.,  
Chicago, Ill.

**Sky Lights.**  
Lupton's Sons Co., David,  
Philadelphia, Pa.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Snips.**  
Peck, Stow & Wilcox Co.,  
Southington, Conn.  
Ryerson & Son, Inc., Jos. T.,  
Chicago, Ill.

**Solder.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Soldering Furnaces.**  
Burgess Soldering Furnace Co.,  
Columbus, Ohio  
Diener Mfg. Co., G. W.,  
Chicago, Ill.  
Quick Meal Stove Co.,  
St. Louis, Mo.  
Ryerson & Son, Inc., Jos. T.,  
Chicago, Ill.

**Specialties—Hardware.**  
Diener Mfg. Co., G. W.,  
Chicago, Ill.  
Hessler Co., H. E., Syracuse, N. Y.  
Stars—Hard Iron Cleaning.  
Fanner Mfg. Co., Cleveland, Ohio

**Statuary.**  
Friedley-Voshardt Co.,  
Chicago, Ill.  
Gerock Bros. Mfg. Co.,  
St. Louis, Mo.

**Steel Pipe—Welded.**  
Chicago Metal Mfg. Co.,  
Chicago, Ill.

**Stove Pipe Reducers.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Stoves—Camp.**  
Quick Meal Stove Co.,  
St. Louis, Mo.

**Stoves—Gasoline and Oil.**  
Quick Meal Stove Co.,  
St. Louis, Mo.

**Stoves and Ranges.**  
Detroit-Michigan Stove Co.,  
Detroit, Mich.  
Quick Meal Stove Co.,  
St. Louis, Mo.  
Thatcher Co.,  
Newark, N. J.

**Tacks, Staples, Spikes.**  
American Steel & Wire Co.,  
Chicago, Ill.

**Tinplate.**  
Burton Co., The W. J.,  
Detroit, Mich.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Osborn Co., The J. M. & L. A.,  
Cleveland, Ohio  
Taylor Co., N. & G.,  
Philadelphia, Pa.

**Tools—Roofers.**  
Wm. Biersmann, Brooklyn, N. Y.

**Tools—TinSmith's.**  
Bertsch & Co.,  
Cambridge City, Ind.

Burton Co., The W. J.,  
Detroit, Mich.  
Dries & Krump Mfg. Co.,  
Chicago, Ill.  
Hyro Mfg. Co., New York, N. Y.  
Interstate Machinery Co.,  
Chicago, Ill.  
Marshalltown Mfg. Co.,  
Marshalltown, Iowa  
Osborn Co., The J. M. & L. A.,  
Cleveland, Ohio  
Peck, Stow & Wilcox Co.,  
Southington, Conn.  
Ryerson & Son, Inc., Jos. T.,  
Chicago, Ill.  
Viking Shear Co.,  
Erie, Pa.  
Whitney Mfg. Co., W. A.,  
Rockford, Ill.

**Torches.**  
Burgess Soldering Furnace Co.,  
Columbus, Ohio  
Diener Mfg. Co., G. W.,  
Chicago, Ill.  
Quick Meal Stove Co.,  
St. Louis, Mo.  
Ryerson & Son, Inc., Jos. T.,  
Chicago, Ill.

**Trade Extension.**  
Copper & Brass Research As-  
sociation, New York, N. Y.  
Sheet Steel Trade Extension  
Committee, Pittsburgh, Pa.

**Trimnings—Stove.**  
Fanner Mfg. Co., Cleveland, Ohio

**Ventilators.**  
Aeolus Dickinson Co., Chicago, Ill.  
Akrot Ventilators, Inc.,  
Chicago, Ill.  
Arex Company,  
Chicago, Ill.  
Berger Bros. Co.,  
Philadelphia, Pa.  
Friedley-Voshardt Co.,  
Chicago, Ill.  
Kernchen Co.,  
Chicago, Ill.  
Lupton's Sons Co., David,  
Philadelphia, Pa.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Standard Ventilator Co.,  
Lewisburg, Pa.

**Ventilators—Ceiling.**  
Hart & Cooley Co.,  
New Britain, Conn.  
Henry Furnace & Fdy. Co.,  
Cleveland, Ohio  
Tuttle & Bailey Mfg. Co.,  
New York

**Windows—Steel.**  
Lupton's Sons Co., David,  
Philadelphia, Pa.

**Wire—Electrical.**  
American Steel & Wire Co.,  
Chicago, Ill.

**Wire Hoops.**  
American Steel & Wire Co.,  
Chicago, Ill.

**Wire Raps.**  
American Steel & Wire Co.,  
Chicago, Ill.

**Zinc.**  
New Jersey Zinc Co., The,  
New York, N. Y.



## WANTS AND SALES

Yearly subscribers to the **AMERICAN ARTISAN** may insert advertisements of not more than fifty words in our Want and Sales Columns **WITHOUT CHARGE**.

Such advertisements, however, must be limited to help or situation wanted, tools or equipment for sale, to exchange or to buy, business for sale or location desired and must reach our office by Thursday of the week of publication. This privilege is not extended to manufacturers or jobbers—or those making a business of buying and selling used machines, employment agencies and brokers.

When sending advertisement state whether your name or blind number is to be used.

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**Lightning Rods—Dealers** who are selling **Lightning Protection** will make money by writing to us for our latest **Factory to Dealer Prices**. We employ no salesmen and save you all overhead charges. Our **Pure Copper Cable and Fittings** are endorsed by the **National Board of Fire Underwriters** and hundreds of dealers. Write today for samples and prices. **L. K. Diddle Company, Marshfield, Wis.**

**For Sale—Sheet metal shop** in California. Fully equipped with all tools necessary for fast work in the contracting line. 10 ft. steel brake, 4 ft. brake, 8 and 3 ft. square shears, 3 ft. rolls, two Ford trucks, benches and bench tools. I am manufacturing a metal specialty and can not devote my time to the contracting end of the business much longer. Address **R475, AMERICAN ARTISAN, 620 S. Michigan Avenue, Chicago, Ill.**

**For Sale—Tin and sheet metal shop** fully equipped. Will sell for \$500.00 down and balance of \$25.00 per month. Stock and tools will invoice about \$2,500.00; will take \$2,000.00. Reasonable rent and plenty of work. Town of 1,400. Other interests reason for selling. Write for full particulars to **Y-474, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**For sale or exchange in Chicago**, well established good paying general sheet metal furnace and roofing business in excellent location with stock and full equipment. A fine opportunity for a live hustler. Selling on account of age. Address **P475, AMERICAN ARTISAN, 620 S. Michigan Avenue, Chicago, Ill.**

**For Sale—Sheet metal shop** employing five men. Doing industrial sheet metal work, well known and advertised good location and reputation. All around able man will make good. Located in Chicago. \$1,500 will handle. Address **O475, AMERICAN ARTISAN, 620 S. Michigan Avenue, Chicago, Ill.**

**For Sale—Sheet metal and radiator shop**—also roofing in good town of 4,000 population in Western Florida. Equipped to do all kinds of work. \$300 needed. Rent to suit purchaser. Address **S475, AMERICAN ARTISAN, 620 S. Michigan Avenue, Chicago, Ill.**

**For Sale—Plumbing and tin shop** in good live town. Good building and cheap rent on main street. Illness in family compels us to sell. \$1,000 will handle if taken at once. Address **G. M. Baugh & Son, Farmington, Ill. M475**

## BUSINESS CHANCES

**For Sale—Furnace and sheet metal business** in southwest Missouri City. Town of 8,000. Stock, machinery, truck, price \$700. Building facing main street, can be bought or rented for \$20 a month. Work on hand now. Reason for selling, retiring. Address **T475, AMERICAN ARTISAN, 620 S. Michigan Avenue, Chicago, Ill.**

**For Rent—Alley tinshop**, northwest side of Chicago. Owner disabled, but would like to keep his customers and has just bought a vacuum furnace cleaner which he will rent out. Address **Z-474, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

## SITUATION WANTED

**Salesman with 11 years' experience** selling cast steel furnaces. Can estimate and lay out standard code and fan jobs. Wide acquaintance with dealers and jobbers west of the Missouri river. Will be ready to change June 15. Best of reference as to character and ability will be supplied. Address **M-474, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

Strictly sober, dependable, married, union sheet metal worker and warm air heating specialist desires connection with good live firm where quality work rules. Do layout work when necessary. Steady position in Colorado or adjacent states preferred. 30 years old. 14 years at business. Believe in Standard Code. Address **J475, AMERICAN ARTISAN, 620 S. Michigan Avenue Chicago, Ill.**

**Situation Wanted—Salesman** having more than 10 years' experience selling furnaces and stoves in Central and West Central States. Familiar with Standard Code and Fan jobs. Available June 15, 1928. Address **D-475, AMERICAN ARTISAN, 620 S. Michigan Avenue, Chicago, Illinois.**

**Situation Wanted—By good tinner**, 55 years old, unable to do any high climbing. Can furnish tools, 8-foot brake included, if wanted. Eastern Minnesota or Northwestern Wisconsin preferred. State salary. Address **F-475, AMERICAN ARTISAN, 620 S. Michigan Avenue, Chicago, Illinois.**

**Tinner and furnace installer wants position**. Can also do plumbing. Twenty years of experience and sober. Prefer location within 300 miles of Milwaukee. Can come any time. Address **L-474, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**Situation wanted by tinner, plumber and furnace man**. Married and want steady job. Age 29 years. Fifteen years at trade. Minnesota or Wisconsin preferred. Learned trade in Germany. Address **O-474, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**In Chicago—Sheet metal estimator and salesman** is looking for a new connection. Architectural and actual building experience along with education make him an ideal contact man. Address **G-475, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**Sheet metal worker and repair man** for such as plumbing, steam fitting and boiler repairs with 15 years of experience wants steady position. Capable and steady. Address **H475, AMERICAN ARTISAN, 620 S. Michigan Avenue, Chicago, Ill.**

## HELP WANTED

**Wanted—Salesman with knowledge of** warm air and pipeless furnaces to cover New York and New Jersey. State terms and qualifications. Address **T-474, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**Wanted—Sheet metal, furnace and general repair man**, married, not over 40 years of age, for southern Wisconsin county town. Steady year around job to the man who can deliver. Have schools and churches. State wages and age in first letter. No boozers wanted. Address **W-474, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**Help Wanted by Established Hardware**—Experienced man capable of handling plumbing, sheet metal, pump and windmill work. Good chance for steady, reliable man in desirable village in northern Illinois. State particulars. The Culison Hardware Co., Hebron, Ill. **K475**

## HELP WANTED

**Wanted—First-class furnace setter or** real salesman to invest several thousand dollars and services in our business to act as superintendent as soon as he qualifies. Such a man will earn from two to eight thousand per year, according to whether he is a salesman or furnace setter, and depending entirely upon his ability. Do not answer unless you are competent, and we do not want a drinker. Job in southern Ohio and no traveling. Address **X-474, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**Wanted—First-class tinner and windmill man**. Must be able to do all kinds of outside and inside work. Steady position in South Dakota town of 5,000. Write fully, giving experience, salary and reference in first letter. Must be sober and not over 40 years of age. Address **R-474, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**Wanted—An experienced tinner and plumber**. Married man preferred. Steady job the year around for the right party. Give reference and salary wanted in first letter. Address **Jamison & Son, Shell Rock, Ia. P-474**

**Sheet Metal Worker and Furnace Man Wanted**—Would like mechanic who can also do plumbing. State experience and whether married or single and wages wanted. Address **C. W. Beer, Alexandria, Nebr. L475**

**Wanted—Experienced furnace installer and sheet metal man**. Only experienced man with good references will be considered. Address **Huron Furnace Co., Huron, S. D. S-474**

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**Will Trade—We have a 5 foot box brake** that will handle metal from 14 gauge up, which we will trade for an 8 foot or 10 foot (10 foot preferred) cornice brake. Address **G. & S. Stove and Furnace Co., 4224 W. North Avenue, Chicago, Ill., Telephone Albany 7891. X475**

**Want to buy cornice brake and bench machines**. Price must be right. Address **Y475, AMERICAN ARTISAN, 620 S. Michigan Avenue, Chicago, Ill.**

**Wanted—1 used 8-foot steel cornice brake**. Address **R. B. Quimby, 2336 O Street, Lincoln, Nebr. E-475**



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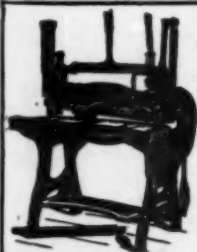
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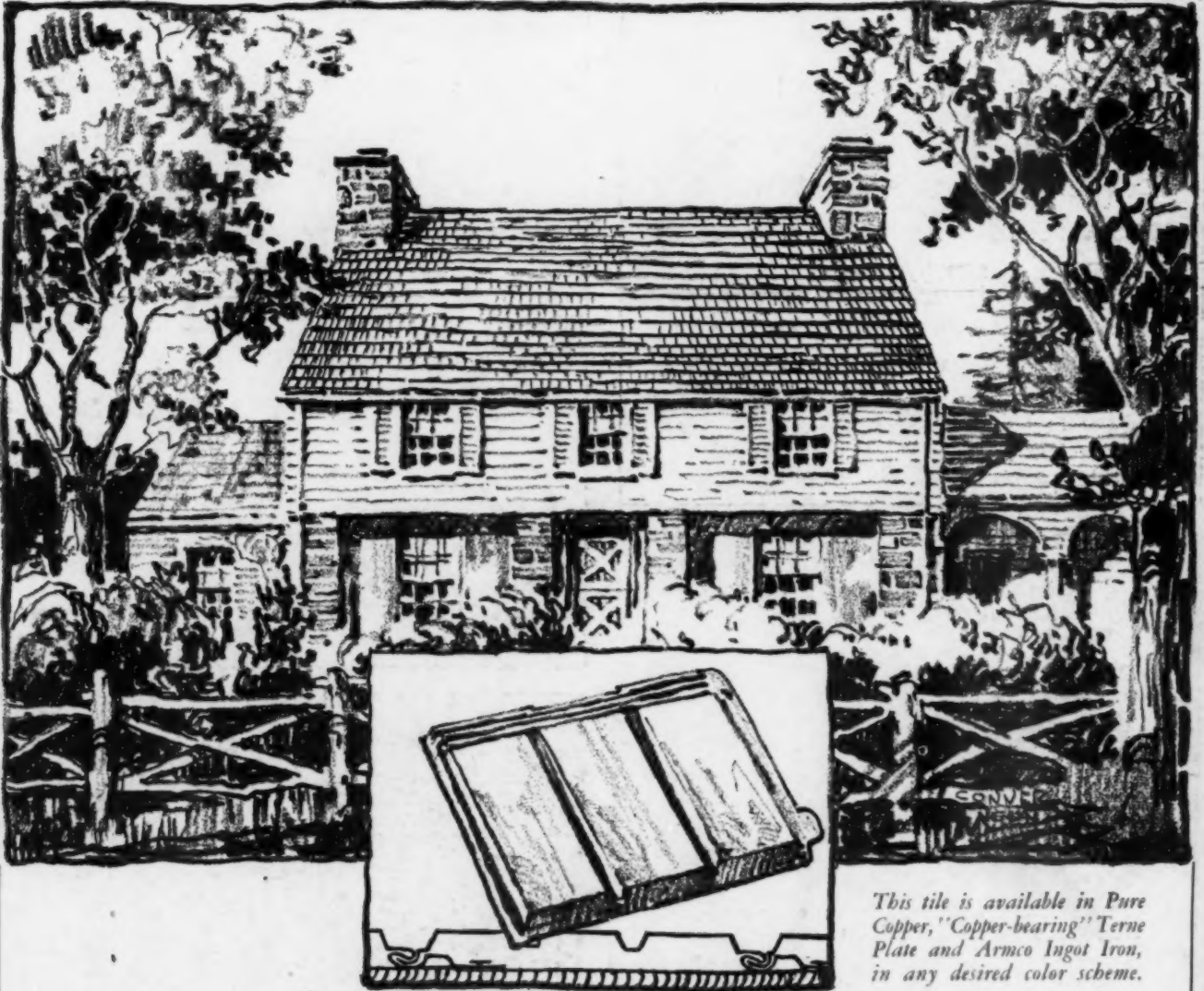
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